

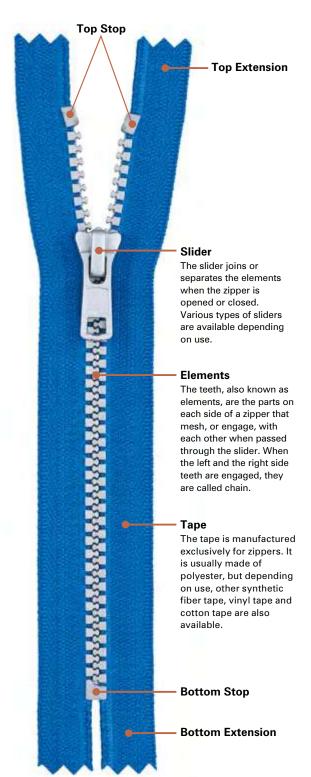
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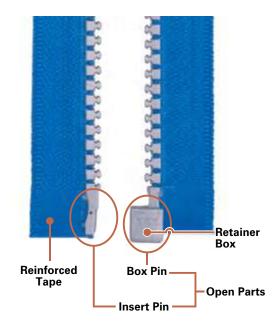
Please note that the photo images may not look exactly the same as the actual items due to various factors, including display and color capability of printing.

Structure of Zippers

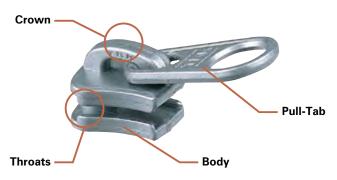
Closed-End Zipper



Open-End Zipper



Slider



Basic Sliders

Non-Lock Slider	Automatic Lock Slider	Semi-Automatic Lock Slider
(DF)	(DA)	(DS)
This slider has no locking mechanism.	The locking mechanism automatically functions when the pull-tab is released.	The locking mechanism functions when the pull-tab is snapped down.

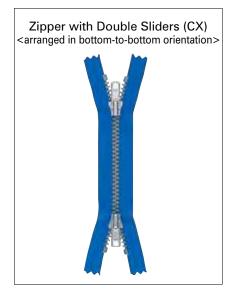
Jeans Slider	Reversible Slider	Double-Pulled Sliders
(GS)	(DU)	(DW)
Semi-automatic lock slider for Jeans.	The pull-tab moves along the rotating rail, enabling the operation from both sides. (Automatic Lock type)	The pull-tab is attached on both sides of the sliders, enabling the operation form both sides.

Function of Zippers

Closed-End



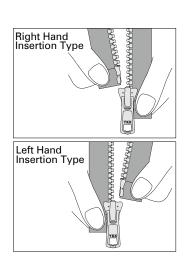




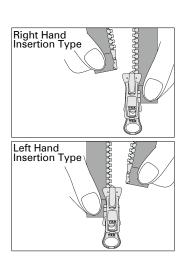
Open-End =

Two-Way Open •

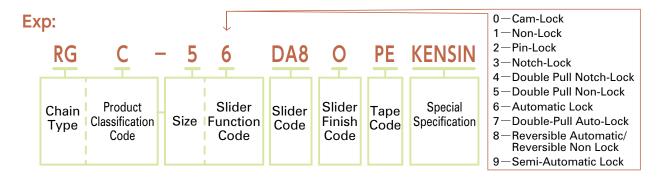








Zipper Code



Various Sizes of Metal Zippers

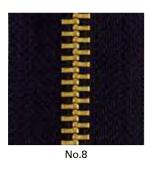
Standard ·











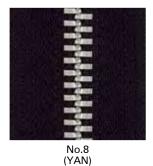


YZiP® •









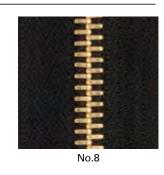
EXCELLA® —

Single Type









Double Type (Double Sliders can be used)







EXCELLA® Light =

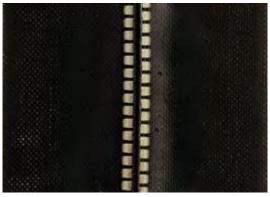
No.3



Symmetric Zipper —



PROSEAL® -



No.8

Metal Zipper (Standard)

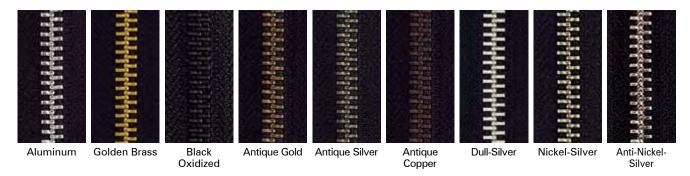


Metal zippers are the oldest type of zipper, the elements of which are comprised of metals such as golden brass, aluminum and nickel.

Size	Closed-End	Open-End	Two-Way Open
2	0	0	_
3	0	0	_
4	0	0	_
5	0	0	0
7	0	0	_
8	0	0	0
10	0	0	0

RGC-56 DA8 O PE

Element Color Variation



Standard Metal Zippers Type

Size	Aluminum	Golden Brass	Black Oxidized	Antique Gold	Antique Silver	Antique Copper	Dull-Silver	Nickel-Silver	Anti-Nickel-Silver
3	MA	MG	MGK	MGKB	MGTH	MGTX		MN	MMN
4	MA	MG	MGK	MGKB	MGTH	_		MN	_
5	RA	RG	RGK	RGKB	RGTH	RGTX		RN	RMN
7	MA	MG	MGK	MGKB	MGTH	MGTX		MN	_
8	MA	*	*	*	*	*	*	_	_
10	MA	MG	MGK	MGKB	MGTH	MGTX	MGDS	MN	_

Metal Zipper with Double Sliders Type

Size	Aluminum	Golden Brass	Black Oxidized	Antique Gold	Antique Silver	Dull-Silver	Nickel-Silver	Anti-Nickel-Silver
5	RAM	RGM	RGMK	RGMKB	RGMTH	_	RNM	RMNM
7	MAM	MGM	MGMK	MGMKB	MGMTH	_	MNM	_
8	MAM	MGM	MGMK	MGMKB	MGMTH	MGMDS	_	MMNM
10	MAM	MGM	MGMK	MGMKB	MGMTH	MGMDS	_	_

*With regards to size 8, please use the double slider type elements even for products with just one slider. (excluding aluminum).

Jeans / Trousers Zipper YZiP®



- This is a strong zipper with thicker elements than those of standard metal zipper.
- There are two types of elements for this zipper: golden brass and nickel.
- This zipper withstands washing processes.
- There are two types of tapes: polyester tape & cotton polyester tape.

Size	Closed-End	Open-End	Two-Way Open
3	0	0	0
4	0	0	_
5	0	0	=

Element Color Variation









Golden Brass

YGRC-39 GSN8 J CP

Antique Copper Anti-Nickel-Silver

Dull Silver

Nickel-Silver

Size	Golden Brass	Black Oxidized	Antique Gold	Antique Silver	Antique Copper	Anti-Nickel-Silver	Dull Silver	Nickel-Silver
3	YGR	YGRK	YGRKB	YGRTH	YGRTX	YMRN	YGRDS	YNR
4	YG	_	YGKB	YGTH	_	_	_	_
5	YG	YGK	YGKB	YGTH	_	_	-	YN

*Deterioration may occur depending on the washing process. Please run a quality confirmation test beforehand.

YZiP® Aluminum



This is a strong zipper with thicker elements than those of standard metal zipper.

	Size	Chain Type	Closed-End	Open-End	Two-Way Open
	3		0	0	_
	4	YAN	0	0	_
	5		0	0	_
ĺ	8		0	0	_

*As the elements of YZiP® Aluminum are made of aluminum alloy, this zipper does not withstand the washing process.

^{*}Tape code: CP (Cotton · Polyester) is available in golden brass, nickel, antique gold and antique silver elements types.

EVERBRIGHT®



- Gloss-polished zippers, are smooth to the touch, glossy and highly corrosion resistance compare to the standard metal zipper.
- YZiP® element type is also available.

Size	Chain Type					Function of Zipper		
Size	Golden Brass	Nickel-Silver	Anti-Nickel-Silver	Nickel-Light-Gold	Closed-End	Open-End	Two-Way Open	
3	MGP	MNP	MGPS	MOP	0	0	-	
4	MGP	MNP	_	_	0	0	-	
5	RGP (RGMP)	RNP (RNMP)	RGPS (RGMPS)	ROP (ROMP)	0	0	0	
7	MGP	MNP (MNMP)	_	_	0	0	_	
8	MGMP	_	_	MOMP	0	0	_	
10	MGP	MNP	_	_	0	0	_	

RGPC-56 DA8 KQ PE BS-SGBH TS-SGTD

Surface Finish Variation •





Nickel-Silver



Anti-Nickel-Silver



Nickel-Light-Gold

^{*()} under Chain type is for Two-way open or double sliders. **%8MGMP** can be used for both single slider zipper and double slider zipper. $\text{\%YZiP}^{\text{\$}}$ type is available in size "3" and "5" (close and open type only).

Shiny Metal Zipper



RGPVGOR-56 DA8P0015 VL1 PE14 EB KENSIN N-ANTI T-TL

- Shiny appearance in various colors.
- YZiP® element type is also available.

Shiny Gunmetal (PVG)

Size	Chain	Closed-End	Open-End	Two-Way Open
5	RGPVG	0	0	-

Shiny Lemon Gold

Size	Chain	Closed-End	Open-End	Two-Way Open
3	MBLP	0	0	_
3	YBLRP	0	_	_
5	RBLP	0	0	_

Shiny Silver

Size	Chain	Closed-End	Open-End	Two-Way Open
3	MGPS1	0	0	_
3	YGRPS1	0	_	_
5	RG(M)PS1	0	0	0
8	MG(M)PS1	0	0	0

Shiny Light Gold

Size	Chain	Closed-End	Open-End	Two-Way Open
3	MGP3	0	0	_
3	YGRP3	0	-	_
5	RG(M)P3	0	0	0
8	MG(M)P3	0	0	0

Shiny Gunmetal (PV1)

Size	Chain	Closed-End	Open-End	Two-Way Open
3	MGPV1	0	0	_
5	RGPV1	0	0	0
8	MG(M)PV1	0	0	0

Shiny Black

Size	Chain	Closed-End	Open-End	Two-Way Open
3	MGLV5	0	0	_
5	RG(M)LV5	0	0	0

Element Color Variation



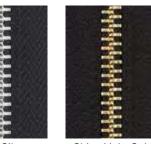
Shiny Gunmetal (PVG)



Shiny Lemon Gold



Shiny Silver



Shiny Light Gold



Shiny Gunmetal (PV1)



Shiny Black

EXCELLA®



SGWOGC-56 DA8 OU P14D C-RAKKA

- Individual element of the zipper is polished and plated.
- Items are available in surface colors including silver, gold and antique finish.
- Double sliders can be used.

Size	Type of Element		Function of Zipper			
Size	i ype oi	Elellielli	Closed-End	Open-End	Two-Way Open	
2	Single SG		0	0	_	
3	Single	SGY	0	0	-	
3	Double	SGW	0	0	0	
-	Single	SGY	0	0	_	
5	Double	SGW	0	0	0	
8	Single	SGY	0	0	_	
0	Double	SGW	0	0	0	

Type of Elements -





Double Type

Surface Finish Variation



Size	Type of Element	Golden Brass	Antique Brass	Antique Silver	Black Silver	Antique Copper	Pink Gold	Luxury Gold	Matte White Bronze	Silver (White Bronze)	Shiny Black	Nickel- Silver	Matte Nickel	Light Antique Brass
2	Single	SGOG	SGI	SGH1	SGV3	SGX	-	-	-	SGC5	SGX7	-	-	_
3	Single	SGYOG	SGYI	SGYH3	SGYV3	SGYX	SGYQP	SGYQ	SGYC9	SGYC5	SGYX7	SGYP	SGYPC	SGYOI
3	Double	SGWOG	SGWI	SGWH3	SGWV3	SGWX	SGWQP	SGWQ	SGWC9	SGWC5	SGWX7	SGWP	SGWPC	SGWOI
5	Single	SGYOG	SGYI	SGYH3	SGYV3	SGYX	SGYQP	SGYQ	SGYC9	SGYC5	SGYX7	SGYP	SGYPC	SGYOI
5	Double	SGWOG	SGWI	SGWH3	SGWV3	SGWX	SGWQP	SGWQ	SGWC9	SGWC5	SGWX7	SGWP	SGWPC	SGWOI
8	Single	SGOG	SGI	SGH3	SGV3	SGX	SGQP	SGQ	SGC9	SGC5	SGX7	SGP	SGPC	SGOI
8	Double	SGWOG	SGWI	SGWH3	SGWV3	SGWX	SGWQP	SGWQ	SGWC9	SGWC5	SGWX7	SGWP	SGWPC	SGWOI

EXCELLA® Light



- EXCELLA® Light is a type of EXCELLA® zipper that is comprised of aluminum alloy elements.
- This zipper is light weight and has bright color variations and is also available in a multi color chain.

Size	Closed-End	Open-End	Two-Way Open	
3	0	0	0	
5	0	0	0	

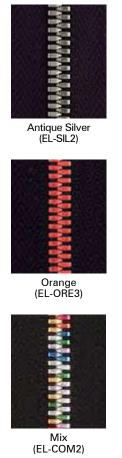
		I =	
Chain Type	Special Feature	Surface Finish Variation	
SAW	_	Aluminum	
	EL-SIL2	Antique Silver	
	EL-BLK3	Black Silver	
	EL-GOL4	Antique Brass	
	EL-GOL8	Golden Brass	
	EL-RED2	Red	
SAWA	EL-ORE3	Orange	
	EL-VIO3	Purple	
	EL-GRN3	Green	
	EL-BLK4	Black	
	EL-BLU6	Blue	
	EL-SIL7	Light Antique Silver	
SAWAM	EL-COM2	Mix	

SAWAMC-56 DA8 C5 P14D EL-ALMT EL-COM2

Surface Finish Variation •



Light Antique Silver (EL-SIL7)





Cotton Touch



The zipper has a natural and soft texture like cotton. They are made of polyester and rayon yarn.

Size	Closed-End	Open-End	Two-Way Open
3	0	0	_
5	0	0	0
7	0	0	_

Tape Color Variation —

T508	T560	T563	T564	T567
T568	T570	T573	T580	T860

RGKBC-56 DA8LH I TRP

***Other colors are also available.**

Marble Tape

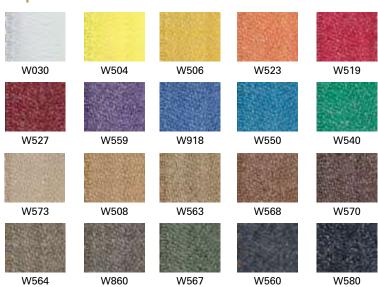


RGC-56 DA8 O TR16

- The marbled, soft-touch tape is made of mixed yarn containing polyester and rayon.
- Various colors are available.

Size	Chain Type	The Color of Elements	Tape	Closed-End	Open-End	Two-Way Open
	RA	Aluminum		0	0	0
5	RG	Golden Brass	TR16	0	0	0
່ວ	RGKB(RGMKB)	Antique Gold	1110	0	0	0
	RN(RNM)	Nickel-Silver			0	0

Tape Color Variation •



**Chain type "RGMKB" and "RNM" are for zippers with double sliders.
**Other colors are also available.

PROSEAL® (Water & Airtight Zipper)



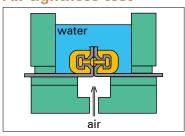
TZNC-81 BFSHR2 Z CR M-DUTY PUL-100 W-SEAL

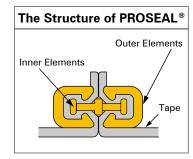
PROSEAL® zipper is the ultimate watertight fastening solution. PROSEAL® technology is based on a strong seal with nickelsilver elements pushed tightly together.

Size	Chain Type	Tape	Closed-End	Open-End	Two-Way Open
1	TZN	PVC	0	_	_
4		CR	0	_	-
		PVC	0	0	_
8	TZN	CR	0	0	-
		PU	0	0	_
12	TZN	CR	0	0	_

	Material			
Element Nickel-Silver				
Slider	Aluminum Bronze			
Tape Chloroprene Rubber / Polyurethane / PVC				

Air tightness test





No air bubbles coming up for 15 seconds will indicate that it has passed the test.

^{*}The level of protection is specified from 0.2 to 1.0 bar water pressure, depending on the size, tape and material of the zipper.



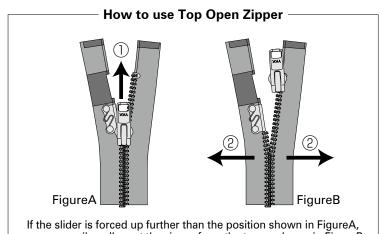
Top Open Zipper



MGOR-106 DA O PE TOP-OP2

This item enables you to quickly open the zipper from the top.

Size	Chain Type	Special Specifications	Closed-End	Open-End	Two-Way Open
	MA				
	MG				
10	MGKB	TOP-OP2	_	0	0
	MGK				
	MN				



you can easily pull apart the zipper from the top as shown in FigureB.

*This zipper is originally designed for quick release application for emergencies. Top-stop strength may be reduced from repeated use.

Symmetric Zipper



As the shape of the elements are symmetric, you can move the two sliders more smoothly.

Size	Chain Type	The Color of Elements	Closed-End	Open-End	Two-Way Open
	MGWP	Golden Brass	0	_	_
	MGWPS	Anti-Nickel Silver	0	_	_
5	MGWKB	Antique Gold	0	-	-
9	MGWTH	Antique Silver	0	_	_
	MGWK Black O	Black Oxidized	0	-	-
	MGWDS	Dull Silver	0	_	_

MGWPC-51 DFW KQ DFW KQ P14W EL-PWAX SLSH-H

Elements Finish Variation



Golden Brass



Anti-Nickel Silver



Antique Gold



Antique Silver



Black Oxidized



Dull Silver

Fire Retardant Zipper



- The flame-resistant zipper uses fire retardant tape materials.
- Cleared by U.S. Federal Aviation Specification, FAR-25-853(b)

Size	Chain Type	Tape	Closed-End	Open-End	Two-Way Open
	RG(RGM)				
5	RGK(RGMK)		0	0	_
	RN(RNM)				
	MG(MGM)	FX19	0	0	0
10	MGK		0	0	-
10	MN				
	MA				

^{**}Chain type "RGM", "RGMK", "RN" and "MGM" are for zippers with double sliders or reverse type zipper.

Available tape color: #567 only

NATULON®



RGTHOR-56 DA8LH H3 PB14 GREEN-F

The NATULON® zipper is made from materials recycled from plastic bottles and other materials, the yarn used in the tape is made from 100% post-consumer recycled materials.

Size	Chain Type	Tape	Closed-End	Open-End	Two-Way Open
3	YGR*		0	0	0
3	MG*		0	0	_
5	RG*	PB**	0	0	0
7	MG*	l LD	0	0	-
8	MG*		0	0	0
10	MG*		0	0	0

C:	Chain Tona	T	Material		
Size	Chain Type	Tape	Element	Tape	
3	YGR*			Recycled PET	
3	MG*		Copper Alloy		
5	RG*	PB**			
7	MG*	''	000000.7.1107		
8	MG*				
10	MG*				

- *The yarn used in the tape is third party certified.
- *The tape does not include core cord and tightening yarn.
- **Tape code and chain type vary among the production sites.
- *For further information, please contact YKK representatives.

NATULON® Fiber Sourced™



RGC-56 DA8 O PR14 GREEN-F

■ The NATULON® Fiber Sourced™ zipper is made from recycled materials such as waste clothing and scraps using chemical recycling technology, and the yarn used in the tape is made from 100% recycled materials.

Size	Chain Type	Tape	Closed-End	Open-End	Two-Way Open
3	MG*	PR12	0	0	_
5	RG*	PR14	0	0	_

Size	Chain Type	Tono	Material		
Size		Tape	Element	Tape	
3	MG* PR12		Copper Alloy	Recycled PET	
5	RG*	PR14	Copper Alloy	Recycled PET	

^{*}The yarn used in the tape is third party certified.

^{*}The tape does not include core cord and tightening yarn.

^{*}Chain type varies among the production sites.

^{*}For further information, please contact YKK representatives.

NATULON[®] Ocean Sourced™



The NATULON® Ocean Sourced™ zipper is made from recycled plastic bottles collected on land within 50 km of the coast (ocean bound plastic),the yarn used in the tape is made from 100% post-consumer recycled material.

Size	Chain Type	Tape	Closed-End	Open-End	Two-Way Open
3	YGR*	PBU12	0	_	_

Size	Chain Type	Tono	Mate	erial
Size	Chain Type	Tape	Element	Tape
3	YGR*	PBU12	Copper Alloy	Recycled PET

- YGRTHC-39 GSBN8 H3 PBU12 GREEN-F
- *The yarn used in the tape is third party certified.
- *The tape does not include core cord and tightening yarn.
- *Chain type varies among the production sites.
- **For further information, please contact YKK representatives.

NATULON Plus®



YGRKBC-39 GSBN8 I PB12 EB-REAT GREEN-F

- This zipper features a higher ratio of recycled material by utilizing both recycled tape and elements.
- 100% of the tape and 34% of the elements are made of post-consumer recycled materials.

Size	Chain Type	Tape	Closed-End	Open-End	Two-Way Open
3	YGR*	PB**	0	_	_
5	RG*	PB**	0	0	0

Ciao	Size Chain Type Tape		Material		
Size			Element	Tape	
3	YGR*	PB**	Recycled Copper Alloy	Recycled PET	
5	RG* PB**		Recycled Copper Alloy	Recycled PET	

- * Materials used in the tape and elements are third party certified.
- *The tape does not include core cord and tightening yarn.
- $\ensuremath{\,\%\,}$ Recycled zinc sliders are optional. They can only be combined with size 5 metal zippers.
- * Tape code and chain type vary among the production sites.
- * For further information, please contact YKK representatives.

Various Sizes of Coil Zippers

Standard

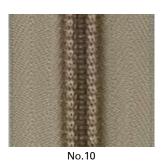




















MINIFA® —



Woven In Type Zipper





FLATKNIT® •



Regarding the reversed use of coil zippers

Generally, coil zippers (standard) are made so that the element is visible on the outside. However, it can also be used with the element hidden, facing inside.





*Depending on the sizes and other conditions, the fasteners may not be available.

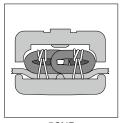
Coil Zippers (Standard)

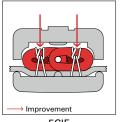


- A coil zipper is made of spiral plastic elements, such as polyester or nylon.
- This is the softest zipper among the three types of zippers.

Size	Chain Type	Closed-End	Open-End	Two-Way Open
2		0	_	_
3	CF	0	0	0
45		0	0	_
5	CIF(CN)	0	0	0
8	CE	0	0	0
10	Cr	0	0	0

Elements have been changed into bean shape with a hollow. It improved abrasion resistance and made opening and closing operation smoother.





5CNF

5CIF

CONCEAL®



CHC-26 DA4Q E BP3 BTM-F P-TOP U19S10

- Zipper with concealed elements.
- It does not disturb the garment's design, so it is best suited for dresses and skirts.

Size	Chain Type	Tape	Closed-End	Open-End	Two-Way Open
2		BP3	0	_	_
2	CH	Р	0	_	_
3	(CC)	BP12	0	0	_
5		PW16	0	0	_

Open Parts





No.3

No.5

BP3/BP12 are knitted tapes, and P/PW16 are woven tapes.The open parts of No.3 are made of metal while for, and No.5 they are made of plastic.

⚠P61~P63

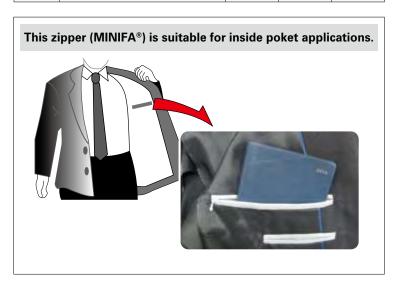
MINIFA®



EFC-01 DF3DR E P10 T-0

- MINIFA® zipper is the thinnest and smallest zipper among the YKK products.
- This thin and small zipper is suitable for inside pocket applications.

Size	Chain Type	Closed-End	Open-End	Two-Way Open
0	EF	0	_	_



Woven In Type Zippers



- Zipper with its elements woven into the tape.
- This zipper is thinner than standard coil zipper and is suitable for slacks.

Size	Chain Type	Closed-End	Open-End	Two-Way Open
4	EE	0	-	-
5		0	_	_

FLATKNIT®



FK.	C-1	256	$D\Delta$	F	RP	

	Zipper	with	its	elements	knitted	into	the	tape.
--	--------	------	-----	----------	---------	------	-----	-------

Size	Chain Type	Tape	Closed-End	Open-End	Two-Way Open
25	FK	BP/BPS	0	_	_

Flex Knit Tape Zippers



- The flex knit tape is soft and stretchable, so it can easily be sewn in a curved application without ruining the fabric features.
- It prevents puckering and aligns the elements.
- This item is suitable for use with light and flexible fabric.

Size	Chain Type	Tape	Closed-End	Open-End	Two-Way Open
3	CE	BPR2	0	-	_
45	CF	DFNZ	0	0	_

Elastic Tape Zipper



Elastic tape zipper: elasticity rate 10%.

Size	Chain Type	Tape	Closed-End	Open-End	Two-Way Open
5	CNF	ELT	0	0	-

^{**}This zipper does not stretch horizontally.**Only tape stretches.

SOFLEX®



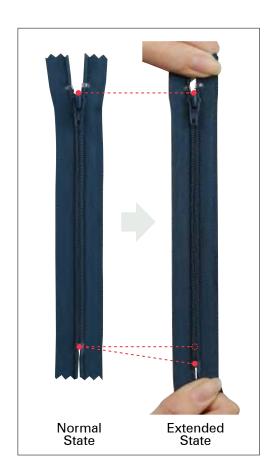
A flexible zipper with vertically stretching tape and element.It stretches 10% vertically when a force of 1 kg is exerted.

Size	Chain Type	Tape	Closed-End	Open-End	Two-Way Open
3		PUW12	0	-	_
45	CS	PUW14	0	0	_
5		PUW16	0	0	_

Color Variation -



CSC-456 DA1 E PUW14 BS-BW P-TOP



*This zipper does not stretch horizontally.*Reversed use is available with size 5.

AquaGuard®



CNT8OR-56 DA8BLH V7 P16N HANTEN P-TOP REVERSE

- Polyurethane laminated zippers with a special water repellent treatment.
- There are three types of film variations: shiny transparent film, matte transparent film and matte colored film with a high quality appearance.

Size	Chain Type	Tape Type	Closed-End	Open-End	Two-Way Open	
3	CFT8	Shiny Transparent Coating				
3	CFT10	Matte Transparent Coating			_	
	CNT8	Shiny Transparent Coating				
5	CNT9	Matte Colored Film	0	0	0	
	CNT10	Matte Transparent Coating				







T10 (234 colors)

Color Variation -

■ Shiny Transparent Coating (**T8), Matte Transparent Coating (**T10)



*Reverse usage is the standard specification.

*The zippers which are shown in the above photos are shiny transparent film type.

PRIFA®



PRIFA® zipper is a zipper with colorful tape prints. Patterns, colors and logos can all be created utilizing computer graphics with ink-jet processes.

	Size	Chain	Closed-End	Open-End	Two-Way Open
	3C	0	0	0	_
Standard	45CF	0	0	0	_
	5CN	0	0	0	0
	3CFT8	0	0	0	_
Agus Guard®	3CFT10	0	0	0	_
AquaGuard®	5CNT8	0	0	0	0
	5CNT10	0	0	0	0
Cleartape	5CNL	0	0	0	_
NATULON®	3CFH	0	0	0	_
NATOLON	5CIHE	0	0	0	0
METALLION®	5CNM	0	0	0	0
RC	5RC	0	_	_	_
(Racquet Coil)	8RC	0	_	_	_
CONCEAL®	5CC	0	0	0	_
VISLON®	3VSUPB	0	0	0	0
VISLOIN	5VSUPB	0	0	0	0

CNFC-56 DA86 E P16N I-YK563 INJET-B REVERSE SLC059

Print Side



Standard (Frontside)

NATULON®





(Backside)



Variation Images



AquaGuard® (T8)



AquaGuard® (T10)



Cleartape



RC (Racquet Coil)



CONCEAL®



VISLON®

**Please contact YKK sales representatives about detailed item information and care instruction for each PRIFA® variations items.

METALLION®



CNMOR-56 DA86 C5 P16N EL-SIL1

- METALLION® zipper is a coil zipper that creates a shiny or matte metallic look on a lightweight coil zipper.
- There are 2 types of elements: shiny type and matte type.

Shiny Type

Size	Chain	Closed-End Open-End		Two-Way Open
3	СМ	0	0	_
5	CNM	0	0	0

Element color	Print side
Silver	EL-SIL1
Gold	EL-GOL1
Nickel	EL-NIC1
Antique Nickel	EL-NIC2
Black Nickel	EL-BLK2
Copper	EL-COP1
Antique Copper	EL-COP2
Light Gold	EL-GOL5
Gun Metal	EL-GUN1

Matte Type

Size	Chain	Closed-End	Open-End	Two-Way Open
3	CV	0	0	_
5	CNV	0	0	0

Color	Size3	Size5
Antique Silver	EL-SIL8	EL-SIL5
Antique Gold	EL-GOL9	EL-GOL7
Matte Black	EL-BLK7	EL-BLK5



Matte Type



Antique Silver Antique Gold Matte Black

- *Reverse use is available.
- *P-Top will be the standard top stop for open-end and Two-way separator. *For size 3, the open parts color will be the same as the tape color.
- **Please contact YKK representatives if you need more detailed information.



AUROLITE®



CNPLC-56 DA8LH C5 P16N EL-PL01 P-TOP

- Iridescent effect coil zipper.
- Depending on the membrane and element color, it gives a different impression.

Size	Chain	Closed-End	Open-End	Two-Way Open
3	CPL	0	0	-
5	CNPL	0	0	0

Size	Element color	Print side	
	Black / Gold	EL-PL11	
	Blue / Pink	EL-PL12	
	Pink / Silver	EL-PL13	
	Clear / Gold	EL-PL14	
3	Natural / Silver	EL-PL15	
3	Red / Pink	EL-PL16	
	Green / Silver	EL-PL17	
	Navy / Silver	EL-PL18	
	Black / Blue	EL-PL19	
	Black / Pink	EL-PL20	

Size	Element color	Print side
	Black / Gold	EL-PL01
	Blue / Pink	EL-PL02
	Pink / Silver	EL-PL03
	Clear / Gold	EL-PL04
5	Natural / Silver	EL-PL05
) 5	Red / Pink	EL-PL06
	Green / Silver	EL-PL07
	Navy / Silver	EL-PL08
	Black / Blue	EL-PL09
	Black / Pink	EL-PL10

Color Variation -



Black / Gold (EL-PL11) (EL-PL01)



Red / Pink (EL-PL16) (EL-PL06)



Blue / Pink (EL-PL12) (EL-PL02)



Green / Silver (EL-PL17) (EL-PL07)



Pink / Silver (EL-PL13) (EL-PL03)



Navy / Silver (EL-PL18) (EL-PL08)



Clear / Gold (EL-PL14) (EL-PL04)



Black / Blue (EL-PL19) (EL-PL09)



Natural / Silver (EL-PL15) (EL-PL05)



Black / Pink (EL-PL20) (EL-PL10)

**Please contact YKK representatives if you would like detailed information.



Clear Coil Zippers



- Clear coil zipper offers a cool impression and lightweight sensation.
- There are 2 types of tape available. One is made of nylon making the zipper totally clear, and the other is made of standard polyester.

Size	Chain	Tape	Closed-End	Open-End	Two-Way Open
2	CI	P12	0	0	_
3	CL	NM	0	_	_
5	CNI	NM2	0	0	-
5	CNL	P16N	0	0	0

Tape Variation =

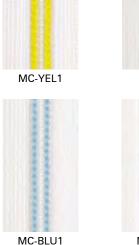




Polyester

CNLOR-56 DA86 C5 NM2 MC-RAB1

Stich Color Variation =







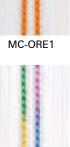












MC-RAB1

MC-GRN1

**Please contact YKK representatives if you would like detailed information.

Stripe Tape Zippers



CNLC-59 DS6YG C5 S2A01 HANTEN MC-BL11 P-TOP STC-B05 Y-BTM

A clear coil zipper with striped design tape.

Size	Chain	Closed-End	Open-End	Two-Way Open	
5	CNL	0	0	0	

Stripe Pattern



One Line Stripe



Multi Colors and Lines Stripe



One Line Stripe



Multi Colors and Lines Stripe

∴ P54, 59

Create-a-Shape Tape Zipper



CNLC-56 DA8MSL1 E PSK MC-GRY5

- You can customize the shape of this zipper freely.
- Available tape colors: 15

Size	Chain	Tape	Closed-End	Open-End	Two-Way Open
5	CNL	PSK	0	_	_

Tape Color Variation



∴ P54, 59

NATULON®



CIFOR-56 DA9 EQJ PB16 GREEN-F TO-IPOM

■ The NATULON® zipper is made from materials recycled from plastic bottles and other materials, the yarn used in the tape is made from 100% post-consumer recycled materials.

Size	Chain Type	Tape	Closed-End	Open-End	Two-Way Open	
3	CF		0	0	0	
4	CF		0	0	_	
	CC		0	0	_	
5	CIB	PB**	0	0	0	
	CIF		0	0	0	
	RCF		0	nly chain sh	ipment	
8	CF		0	0	0	
0	RCF		0	nly chain sh	ipment	
10	RCF		Only chain shipment			

C:=a	Chain Tuna	Tono	Material			Material	erial
Size	Chain Type	Tape	Element	Tape			
3	CF						
45	CF			Recycled PET			
	CC	PB**	PET				
5	CIB						
	CIF						
	RCF						
8	CF						
0	RCF						
10	RCF						

- *The yarn used in the tape is third party certified.
- *The tape does not include core cord and sewing thread.
- *Tape code varies among the production sites.
- *For further information, please contact YKK representatives.

NATULON® Fiber Sourced™



CIHEOR-50 RC1 EWJ PR16 ECOMARK GREEN-F

The NATULON® Fiber Sourced™ zipper is made from recycled materials such as waste clothing and scraps using chemical recycling technology, and the yarn used in the tape is made from 100% recycled materials.

Size	Chain Type	Tape	Closed-End	Open-End	Two-Way Open
	CF	PR12	_	0	_
3	CFH	PR12	0	0	0
	CHH(CCH)	PR10	0	_	_
45	CFH	PR14	0	0	_
5	CIF	PR16	_	0	_
5	CIHE	PR16	0	0	0

Cina	Chain Tuna	Tono	Mate	erial	
Size	Chain Type	Tape	Element	Tape	
	CF	F PR12 PET			
3	CFH	PR12	Recycled PET		
	CHH(CCH)	PR10	Recycled PET	Recycled PET	
45	CFH	PR14	Recycled PET	i necycled i Li	
5	CIF	PR16	PET		
5	CIHE	PR16	Recycled PET		

- **Recycled PET used in the element is made from plastic bottles and other materials.
- *Recycled PET used in the tape is made from waste clothing and scraps.
- *The yarn used in the tape is third party certified.
- *The tape does not include core cord and sewing thread.
- *For further information, please contact YKK representatives.

NATULON® Ocean Sourced™



The NATULON® Ocean Sourced™ zipper is made from recycled plastic bottles collected on land within 50 km of the coast (ocean bound plastic),the yarn used in the tape is made from 100% post-consumer recycled material.

Size	Chain Type	Tape	Closed-End	Open-End	Two-Way Open
3	CF	PBU12	0	0	_
5	CIF	PBU16	0	0	_

Size	Chain Tuna	Tono	Mate	erial	
Size	Chain Type	Tape	Element	Tape	
3	CF	PBU12	PET	Recycled PET	
5	CIF	PBU16	PET	Recycled PET	

- CIFOL-56 DA8LH C5 PBU16 GREEN-F
- *The yarn used in the tape is third party certified.
- *The tape does not include core cord and sewing thread.
- *For further information, please contact YKK representatives.

NATULON Plus®



CIBEOL-56 EAB C5 PB16 GREEN-F

- This zipper features a higher ratio of recycled material by utilizing both recycled tape and elements.
- The material used in the coil zipper chain of the NATULON Plus® zipper is made from 100% post-consumer recycled material.
- It can be further increased by pairing with a recycled diecast zinc slider.

Size	Chain Type	Tape	Closed-End	Open-End	Two-Way Open
3	CFBE	PB**	0	0	0
5	CIBE	PB**	0	0	0

Size	Chain Type Tape		Material		
Size	Chain Type	rape	Element	Tape	
3	3 CFBE PB**		Recycled PET	Recycled PET	
5	CIBE	PB**	Recycled PET	Recycled PET	

- *Materials used in the tape and elements are third party certified.
- *Tape code varies among the production sites.
- *For further information, please contact YKK representatives.
- *Recycled zinc sliders are optional. They can be combined with zippers other than the NATULON Plus® zipper.

GreenRise®



CIGROR-56 DA86 EJ PGR16 ECOMARK G-RISE

- The GreenRise® zipper is made from biomass-based raw materials.
- The zipper's main material, polyester, contains approximately 30% plant-based materials.
 - *Plant-derived polyester used in: Tape, elements, cord, sewing thread

Size	Chain Type	Tape	Closed-End	Open-End	Two-Way Open
3	CGR	PGR12	0	0	0
5	CIGR	PGR16	0	0	0

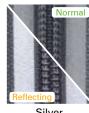
Reflective Zippers



Reflective film is used on the tape.

	Size	Chain	Silver (REFLX-F)	Semitrans Parent (RFS003D)	Aurora (RFS007D)	Silver Line (ST-SH2)
	3	CF	0	0	0	0
	45	CF	_	0	_	_
	5	CIF	0	0	0	_
	ິວ	CNF	_	_	_	0

Tape variation -









Semi Transparent (RFS003D)

Aurora (RFS007D)

Silver Line (ST-SH2)

CIFC-56 DA86 EJ P16 RFS007D TB-IPOM

Color Combination Coil Zippers



CNFMR-5* DA8LH EJ DAG8 E P16N COMB-B P-TOP

This is a colorful zipper, with different tape and element colors.

Tape and element in different color

Size	Chain Closed-End Op		Open-End	Two-Way Open	
3	CF	0	-	_	
5	CN	0	0	0	

Sewing thread (Single Stitch)

Size	Chain	Closed-End	Open-End	Two-Way Open	
3	CF	CF O		_	
5	CN	0	0	0	

Sewing thread (Double Stitch)

	Size	Chain	Closed-End	Open-End	Two-Way Open		
	3	CF	0	_	-		
	5	CN		\cap	_		

Types of combination •



Tape and element in different color



(Single stitch)



(Double stitch)

WOVEN-IN TOUGH ZIPPER



Flat Apperance & Low element profile Reduced chain thickness by aproximately 15%* less compared to our standard racquet coil zipper.

*This value may vary by chain size, color.

Abrasion resistance

Precisely engineered to pass the tough abrasion resistance

Higher abrasion resistance compared to our standard racquet coil zipper.

Repairable

New innovative slider system provides zipper pull tab replacement.

*YKK takes no responsibility for the change in quality and performance of its products caused by parts manufactured by a third party other than YKK or processes carried out by party other than YKK.

Size	Chain Type	Tape	Closed-End	Open-End	Chain
55	EYLA, EYLB	P16, P18	_	_	0
85	ETLA, ETLD	P17, P20	_	_	0
10	EYLA	P20	_	_	0

EYLA=Dye chain, EYLB=Solution dye black chain

*Chain and slider supply is only available. (Cut zipper not avai lable)

Size	Slider Body Type			
55	ZF5			
85	ZF5, ZL1			
10	ZL1			

EYLA CHAIN P16 DYED HANK200 EYL ZF5W NL PARTS SP-SIL707

Slider Plating Variation



Nickel Silver (NL)



Matte Nickel (NSL)



Black Nickel Light (VL)



Black Nickel Medium (VLB)



Black Nickel Dark (VLD)

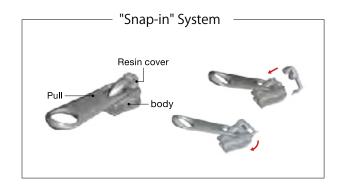
Plastic "Snap-in" Part Color Variation







GUN704



- *Reverse use not available.
- *Enamel Painting is not available.
- **Please contact YKK representatives if you need more detailed in formation.

Racquet Coil Zipper



- The Racquet Coil "RC" Zipper.
- Especially designed for luggage and backpack where resistance to abrasion is a must.
- This zipper was precision engineered to fulfill the strength.

Size	Chai	Closed-End	Open-End	Chain
5	RCF	_	_	0
8	RCF	_	_	0
10	RCF	_	_	0

**Tape code varies among the production sites. **For further information, please contact YKK representatives.

Various Sizes of VISLON® Zippers

Standard -



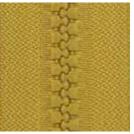
No.3



No.4



No.5



No.8



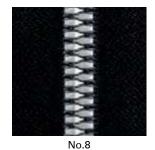
No.10

METALUXE® •



METALUXE® Fin Type —





METALUXE® Tough —



No.5



No.5

VISLON® Slim ———



No.5

VISLON® (Standard)



- The VISLON® zipper is made of injected plastic elements, such as polyacetal resin.
- It is lighter than metal zippers of the same size.

Size	Chain	Closed-End	Open-End	Two-Way Open
3		0	0	0
4	vs	0	0	_
5	V5	0	0	0
8		0	0	0
10	VE	0	0	0
15	VF	0	0	_

VISLON® Metallic Color



VSMVOR-56 DA86 EM PT14 NEWKOB4	

A VISLON® zipper made using metallic color elements.
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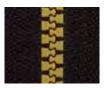
Available element colors: 6

Size	Chai	Chain		Open-End	Two-Way Open
3		VSM*	0	0	0
4	VCM		0	0	_
5	VSIV		0	0	0
8			0	0	0
10	VM [±]	+	0	0	0

Size	Chain	Element Color
	VSMP	Golden Brass
3	VSMG	Gold
4	VSMB	Antique Gold
5	VSMV	Silver
8	VSMR	Antique Silver
	VSMJ	Matte Black

Size	Chain	Element Color		
	VMG	Gold		
	VMB	Antique Gold		
10	VMV	Silver		
	VMR	Antique Silver		
	VMJ	Matte Black		

Color Variation



Golden Brass (MP)



Gold (MG)

Antique Gold (MB)



Antique Silver (MR)

Matte Black (MJ)

AquaGuard® VISLON® Zippers



- Polyurethane laminated zippers with a special water repellent treatment.
- Metallic color type is available.

Size	Chain	Tape	Closed-End	Open-End	Two-Way Open
	VT8	PS12A	0	0	0
3	VT9	PS14	0	0	0
	VT10	PS12C	0	0	0
	VT8	P14A	0	0	0
5	VT9	PS14	0	0	0
	VT10	P14C	0	0	0
	VT8	P16A	0	0	0
8	VT9	PS16	0	0	0
	VT10	P16C	0	0	0

Combination Pattern =

COMBI-1 -



COMBI-2







COMBI-3





VISLON® Transparent Type



The elements are made of clear nylon.

Size	Chain	Closed-End	Open-End	Two-Way Open
3	VSNT	0	0	0
4		0	0	_
5		0	0	0
8		0	0	0

Element Color Variation



%Other colors are also available. **∴** P59

VISLON® Slim

VSNTC-56 DA8MSL1 C5 PT14 EL-ORE2



- Thinnest, lightest and the most flexible VISLON® type zipper.
- 5VH chain thickness is about 75% of 5VS chain and even thinner than 3VS. Chain weight is about 77% of 5VS.

Size	Chain	Closed-End	Open-End	Two-Way Open
5	VH	0	0	0

METALUXE®



VYMVOR-56 DA8VY EM P14A NEWKOB4

- METALUXE® zipper is a VISLON® zipper with a metallic look.
- There are 3 variations: Metal Colors, Metallic Colors, Mirror-like Finish.

Metal Colors / Metallic Colors

Size	Chain	Closed-End	Open-End	Two-Way Open
3	\ /\ /\ /\ / \ *		_	_
5	VYM* VYQ	0	0	0
8	8 710			

Metal Colors (VYM*)				
Element color	Chain			
Golden Brass	VYMP			
Gold	VYMG			
Antique Gold	VYMB			
Silver	VYMV			
Antique Silver	VYMR			
Matte Black	VYMJ			

Metallic Colors (VYQ)			
Element Color Special Featu			
Blue	EL-BLU9		
Pink	EL-PIK2		
Light Green	EL-GRN6		
Emerald Green	EL-GRN5		
Copper	EL-COP4		
Violet	EL-VIO4		

Mirror Like Finish

Size	Chain	Closed-End	Open-End	Two-Way Open
5	VYXM*	0	0	0

Mirror Like Finish (VYXM*)					
Element Color	Chain	Foil Color			
Gold	VYXMG	LF-GOL			
Silver	VYXMV	LF-SIL			
Copper	VYXMC	LF-COP			
Hologram	VYXMV	LF-HOL			
Chrome	VYXMJ	LF-CRO			
Matte Gold	VYXMG	LF-MATG			
Matte Silver	VYXMV	LF-MATS			

Metal Colors (VYM*)



Golden Brass (VYMP)



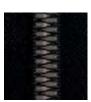
Gold (VYMG)



Antique Gold (VYMB)



Silver (VYMV)



Antique Silver (VYMR)



Matte Black (VYMJ)

Metallic Colors (VYQ)



Blue (EL-BLU9)



Pink (EL-PIK2)



Light Green (EL-GRN6)



Emerald Green (EL-GRN5)



Copper (EL-COP4)



Purple (EL-VIO4)

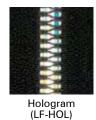
Mirror Like Finish (VYXM*)



Gold (LF-GOL)



Copper (LF-COP)









(LF-MATG) (LF-MATS)

*Item strength is slightly lower than the standard item, so please do not subject this product to heavy loads.

METALUXE® Fin Type



VYFQC-56 DA9 H3 P14A BS-IPOM EL-SIL6 N-ANTI

- Special element design with extended fin.
- It has higher strength, reduction of slider snagging and the elements coming off, compared to 5VS.
- The slider runs on the fins protecting the tape from abrasion.

Size	Chain	Closed-End	Open-End	Two-Way Open
_	VYFM*			
) 5	VYFQ*	1 0		_

Metal Colors (VYFM*)
Element color	Chain
Golden Brass	VYFMP
Gold	VYFMG
Antique Gold	VYFMB
Silver	VYFMV
Antique Silver	VYFMR
Matte Black	VYFMJ

Metallic Colors (VYFQ*)				
Element Color	Special Feature			
Blue	EL-BLU9			
Pink	EL-PIK2			
Light Green	EL-GRN6			
Emerald Green	EL-GRN5			
Copper	EL-COP4			
Purple	EL-VIO4			
Aluminum Silver	EL-SIL4			
Gun Metallic	EL-SIL6			



Element

- ***Open-end can use ez-TRAK® only.**
- **Regarding element colors, please refer to the color chart of METALUXE® on P.36.

METALUXE® Tough



VDCMBC-51 DF2L2(I) P14A

- High-strength metal look zipper, available in METALUXE® product line.
- This high-strength is 66% stronger than VISLON® standard*.
 - *Compared to No.5 VISLON® (Chain crosswise strength test)
- It is 56% lighter weight than a metal zipper because of the plastic materials.

Size	Chain	Closed-End	Open-End	Two-Way Open
5	VDCM*	0	_	_

Element Color Variation •



Antique Gold (VDCMB)



Antique Silver (VDCMR)



Metallic Black (VDCMJ)

NATULON®



VSOR-56 DA86 EJ PB14 NEWKOB4 GREEN-F

The NATULON® zipper is made from materials recycled from plastic bottles and other materials, the yarn used in the tape is made from 100% post-consumer recycled materials.

Size	Name	Chain Type	Tape	Closed-End	Open-End	Two-Way Open	
3	Standard	VS		0	0	0	
4	Standard	VS		VS	0	0	_
	Standard	VS		0	0	0	
5	Metallic color	r VSM PB**	0	0	0		
	METALUXE®	VYM		0	0	0	
0	Standard	VS		0	0	0	
8	METALUXE®	VYM		0	0	_	

Size	Name	Chain Type	Tape	M	aterial	
Size	INATITE	Спаш туре	Tape	Element	Tape	
3	Standard	VS				
4	Standard	VS				
	Standard	VS		POM		
5	Metallic color	VSM	PB**		POM	Recycled PET
	METALUXE®	VYM				
0	Standard	VS				
8	METALUXE®	VYM				

- *The yarn used in the tape is third party certified.
- *The tape does not include core cord and tightening yarn.
- *Tape code varies among the production sites.
- *For further information, please contact YKK representatives.

NATULON® Fiber Sourced™



VSPBEOR-56 DA86 EJ PR14 GREEN-F NEWKOB4

The NATULON® Fiber Sourced™ zipper is made from recycled materials such as waste clothing and scraps using chemical recycling technology, and the yarn used in the tape is made from 100% recycled materials.

Size	Chain Type	Tape	Closed-End	Open-End	Two-Way Open
3	VS	PR12	0	0	-
4	VS	PR13	0	0	_
4	VSPBE	PR13	0	0	_
5	VS	PR14	0	0	0
3	VSPBE	PR14	0	0	0

Size	Chain Type	Tape Material Ta		erial
Size	Chain Type			Tape
3	VS	PR12	POM	
4	VS	PR13	POM	
4	VSPBE	PR13	Recycled PBT	Recycled PET
5	VS	PR14	POM	
3	VSPBE	PR14	Recycled PBT	

- **The Recycled PBT element has relatively low chain strength compared to virgin POM element. Element color would be limited.
- *The yarn used in the tape is third party certified.
- *The tape does not include core cord and tightening yarn.
- $\ensuremath{\mbox{\%}}$ For further information, please contact YKK representatives.

GreenRise®





- The GreenRise® zipper is made from biomass-based raw materials.
- The zipper's main material, polyester, contains approximately 30% plant-based materials.
 - *Plant-derived polyester used in: Tape, cord

Size	Chain Type	Tape	Closed-End	Open-End	Two-Way Open
5	VS	PGR14	0	0	0

VSOR-56 DA86 EJ PGR14 ECOMARK G-RISE NEWKOB4 OP-NW2P

VISLON® Chain Combination Type



- This is a colorful zipper that has different color tape and elements.
- There are four types of combinations.

Size	Chain	Special Feature	Closed-End	Open-End	Two-Way Open
3		Α	0	0	0
4	VS	COMB - B	0	0	_
5	VS	COIVID - C	0	0	0
8		D	0	0	0



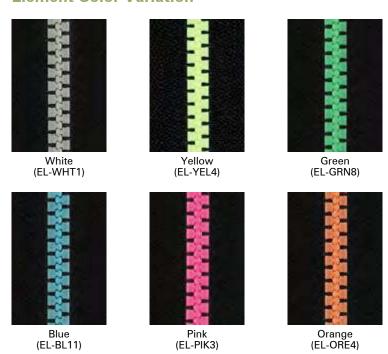
LUMIFINE®



- The luminescent zipper glows in the dark.
- LUMIFINE® glow-in-the dark zipper is now available in six neon color combinations.

Size	Chain	Closed-End	Open-End	Two-Way Open
3	Ver	0	0	0
5	VSK	0	0	0

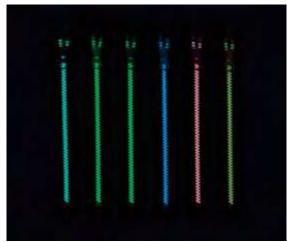
Element Color Variation -



Under light



When illuminated



QuickFree™

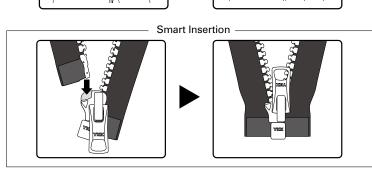


VSOR-56 NAMR2 EW PT14 N-ANTI NEWKOB4 OP-2NAM

- The zipper can be opened by simply pulling apart the garment or pulling the zipper chain sideways.
- Enlarged bottom part of slider body allows quick and easy insertion of the separable pin into the slider.

Size	Chain	Tape	Closed-End	Open-End	Two-Way Open	
5	VS	PT14	_	0	_	

Quick Release

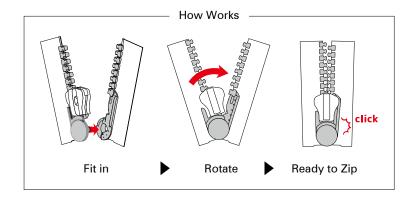


click-TRAK®



- Completely new and easy way to close the zipper. Simply position and snap together the open parts.
- Open parts components automatically rotate and engage by pushing open parts down.
- Components are enlarged for easier hand assembly/ operation.

Size	Chain	Closed-End	Open-End	Two-Way Open
5	VS	_	0	_



VSOL-56 DAKLH C5 PT14 CK-TRAK N-ANTI NC-F08 NEWKOB4

How to use click-TRAK®

1. Set

Grip open parts.

Align left & right components.

(Slider must be at the very bottom.)



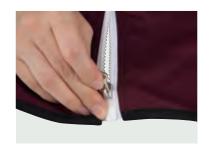
2. Click

Push pull tab & open parts down. Open parts components will self align / engage.



3. Pull up

Pull up on slider tab.
One hand operation possible once open parts components are engaged.



Please visit YKK Fastening website for instructional movie.

AQUASEAL®

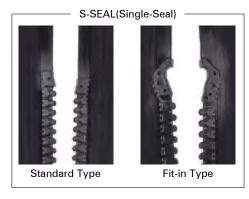


VFWBC-101 NFNT580 EN PU23B AQ-MRK2 BS-NEW2 P-HIMO1 TS-SEAL U25 WBS2BHK

- Combining VISLON® technology with a new innovative seal between the zipper elements, AQUASEAL® zipper allows a smooth and easy operation with perfect protection.
- Size 10, sealed at 0.3 bar water pressure, is individually tested before shipment and laser marked for traceability.

Size	Chain	Tape	Closed-End	Open-End	Two-Way Open
5	VFWN	PU19B	0	0	0
10	VFWB	PU23B	0	0	0
10	VEVVB	PU31B	0	0	_

Top Stop -





Bottom Stop



Standard Type



Fit-in Type (Sealed)

Open Parts —



Reinforcement Tape •



For Top



For Bottom

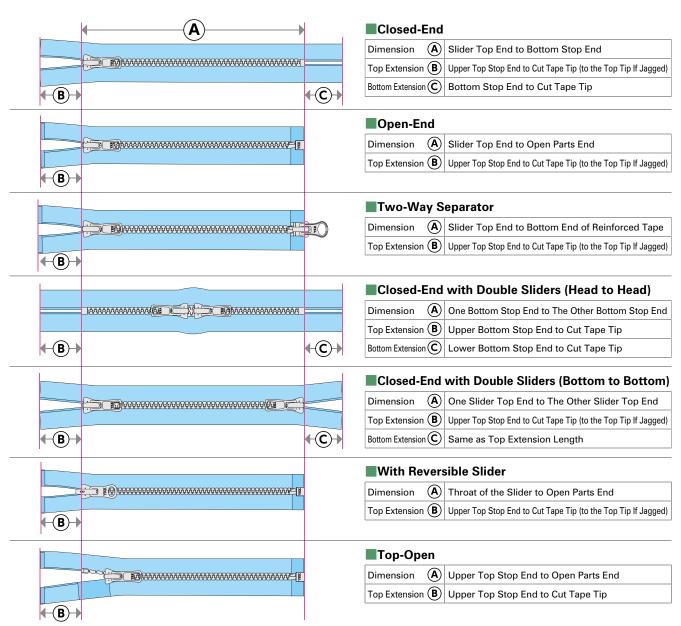
- *Airtightness inspection for size 5 is an option.
- *The tape color is black (#580) only.



Dimensions of Zippers and Ways of Measuring



Standards for Measuring Zipper Dimensions



Dimension Tolerance and Ways of Measuring

Completely close the zipper when measuring.

The indicated zipper dimension has the specified tolerance as follows:

Product Dimension	Maximum Tolerance
≦ 300 mm	± 5mm
300 mm < D ≦600 mm	±10mm
600 mm < D ≦1200 mm	±15mm
1200 mm <	±2.0%

(as per JIS S 3015)

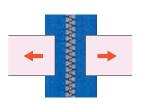


Methods to Evaluate Zipper Strength

There are various ways to evaluate zipper strength.

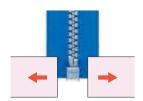
Basic strengths are determined by the following tests (based on JIS S 3015:2019), then the appropriate application for each item is determined.

**Tensile Testing Machine Conditions — Tensile Speed: 300 mm/min, Clamp Width: 25 mm



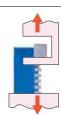
■ Chain Crosswise Strength (per 2.5cm width)

An engaged zipper chain is pulled crosswise as shown at a constant speed.



Open Parts Crosswise Strength

Only the open parts are set at the clamp of the tensile testing machine and pulled crosswise.



Retainer box pull off Strength

A jig is attached to the retainer box and is pulled in the vertical direction to measure the strength.



Retainer box pull off Strength

The bottom part of one side of the zipper is fixed, the slider is pulled up to the top stop, and then it is pulled hard to measure the vertical pull off strength.

**The standard is 70 N. However, this is limited to items for children. Application of the standard shall be discussed between the supplier and customer.



■Top Stop Holding Strength

The lower part of an engaged zipper is held securely, then the slider pulled to the top is further pulled upwards.



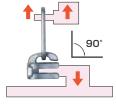
■Bottom Stop Holding Strength

The slider is pulled down to the bottom stop, and each side of the chain is pulled out to each direction.



■Slider Locking Strength

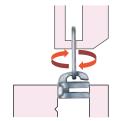
The slider lock is engaged in the middle of a chain, then each side of the chain is pulled out to each direction.



Slider Mouth & Pull Holding Strength (90°)

Tension force is applied to both the pull-tab and the body bottom of an assembled slider. In addition to the shown 90° angle, 45° angle is also tested.

(Tensile Testing Machine Speed: 100 mm/min)



Slider pull-tab twisting Strength

The body of the slider is fixed, and with the pull-tab positioned stood vertically, it is twisted to 180° to measure the strength.

*Twist tester: Twisting speed approximately 9 °/sec

Strength Standards (Based on JIS-S2015:2019)



■All standard YKK zippers meet JIS requirements

When selecting zippers, please check the strength required for the intended application.

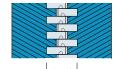
YKK also sets its own quality standards to produce and provide better quality products.

Even items meeting the same JIS class have different strengths per item, so please contact YKK representatives for more detailed specifications.

JIS Classification

Class	Class Ultra Light Light Medium		Medium-Heavy	Heavy	Ultra Heavy				
Chain Width (mm)		2.5 - under 4.0	4.0 - under 5.5		5.5 - under 7.0		7.0 - under 8.5	8.5 - under 12.0	12.0
locally date and	MG		3MG	4MG	5RG	7MG	8MGM	10MG	
Individual Element	YG		3YGR	4YG	5YG				
Lienieni	VF		3VS	4VS	5VS		8VS	10VF	15VF
	CF	2CF	3CF	45CF	50	:IF	8CF	10CF	
Continuous	EF		4E	F	5EF				
Element	CH		2CH	3CH					
	FK		25	FK					

- %Zippers are classified according to their chain width (i.e. the width of the engaged elements).
- *Individual Element: Element type of Metal zipper and Vislon zipper.
- *Continuous Element: Element type of coil zipper.



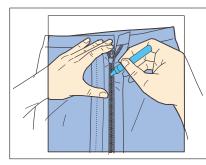
|∢ →| Chain Wid

Strength Requirement according to JIS Standard

Strength	Unit			Ultra Light	Light	Medium	Medium-Heavy	Heavy	Ultra Heavy	
			Chemical Fiber Tape	150	230	300	390	490	690	
		Individual	Chemical Fiber Tape with Reinforcement (for garment requiring higher durability)	300	400	500	600	700	800	
Chain		Element	Except for Chemical Fiber Tape							
Crosswise	N		Knitted Tape	100	150	200	250	300	_	
Ciosswise			Aluminium alloys							
		Cantinuaua	Chemical Fiber Tape	200	250	450	540	590	_	
		Continuous Element	Except for Chemical Fiber Tape	150	200	200	300	350	_	
		Licinioni	Knitted Tape	130	200	200	300	330		
Separating Unit	N	Individual Element		50	70	80	120	150	300	
Crosswise	IN	Continuous Element		-	50	80	120	150	_	
Retaining Pull-Off	N			40	50	60	80	120	200	
Retainer box pull off Strength	N			This is limited to items for children. Application of the standard shall be discussed between the supplier and customer.						

			Class	Ultra	Light	Lig	ght	Med	lium	Medium	n-Heavy	Hea	avy	Ultra l	Heavy
Strength	Unit		Slider Types	Metal Slider	Plastic Slider										
Top Stop Slider	N			40	30	50	40	70	60	100	80	120	100	200	170
			Chemical Fiber Tape	15	15	40	30	50	40	80	60	100	100	150	150
-		Individual	Chemical Fiber Tape with Reinforcement (for garment requiring higher durability)	15	_	40	_	50	_	80	_	100	_	150	_
Bottom Stop Holding	N	N Element	Except for Chemical Fiber Tape Knitted Tape Aluminium alloys	15	15	30	30	50	40	80	60	100	100	150	150
		Continuous Element		30	20	50	30	70	60	120	90	150	120	_	_
Slider	N	Individual Element		15	10	25	20	40	25	50	35	60	50	_	_
Locking	Continuous Element		10	10	10	10	35	25	50	35	60	50	_	_	
Slider mouth & Pull Holding (90°)	N			60	40	80	50	150	100	170	100	200	150	300	300
Slider Pull-Tab Twist	N∙m			0.15	0.1	0.15	0.1	0.45	0.35	0.7	0.45	0.7	0.6	_	_

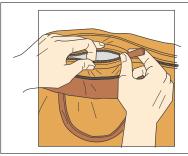
Proper Use of Zippers



Rough Slider Operation

Do not force the slider even if it doesn't move smoothly, or it may cause the elements to misengage.

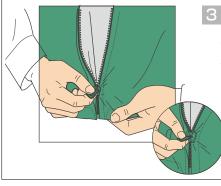
Apply paraffin or wax on both front and back surfaces of the elements, then move the slider back and forth to regain smooth operation.



2 Pulled Out Elements

Trying to forcibly close the zipper of an overfilled bag will cause element and tape breakage due to the excess load on the elements.

Reduce the burden by reducing the content of the bag and by bringing both sides of the chain close to each other before closing the zipper.



3 Fabric Caught in Slider

A slider may catch the fabric and get stuck during its operation.

Avoid forcing it to move or it will worsen the problem.

Slowly move the slider while pulling out the caught fabric

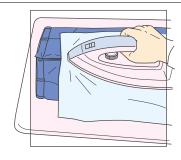
Please allow enough room for the slider to move smoothly when sewing the zipper onto the fabric.



4 When Dressing / Undressing

Make sure to completely open the zipper when dressing / undressing. Dressing / undressing without completely opening the zipper may damage elements / slider function.

When closing the zipper, the slider will move more smoothly if the hook & eye or the top button is fastened beforehand.



5 Proper Ironing Procedures

Not only the garment fabrics, but also zippers have appropriate ironing temperature according to their materials. Please keep the specified ironing temperature to maintain the zipper quality.

Also make sure to completely close the zipper, lay down the slider pulltab in the regular position and place ironing fabric on the zipper.

CONCEAL®	160°C
FLATKNIT®	150°C
VISLON®	130°C
Coil Zippers	160℃

(Pressure: 1.5kg, Applied for 10 sec.)

**Direct ironing onto elements or sliders may cause undesirable effects.



6 Proper Laundry Procedure

Make sure to completely close all the zippers when using the washing / drying machines. Incompletely closed zipper may be entangled with other load and result in element or slider damage or damage on other fabric.

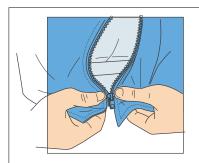
Long or slim slider pull-tab may be caught in the drum holes and break, so the use of a laundry net for those items is recommended.

After the drying process, do not operate the zipper until the garment temperature has cooled down.

Strong alkaline detergent or chlorinated bleach may affect zipper operation. In that case, use softeners, paraffin or wax to regain the smoothness.

Do not presoak garment with zippers in washing solution, or it may cause significant damage.

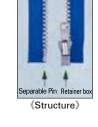
Proper Use of Open-End Zippers



1 Open-End Zipper

♦When closing

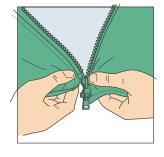
- 1. Completely pull down the slider until it touches the retainer box.
- Fully insert the insert pin to the box. (Incomplete insertion may cause troubles.)
- 3. While holding the insert pin side with the right hand, pull up the slider with the left hand.



◆When opening

- 1. Completely pull down the slider until it touches the retainer box.
- 2. Gently pull out the insert pin with the right hand





2 Two-Way Open

◆When closing

- 1. Pull down the upper slider until it touches the bottom slider.
- 2. Insert the insert pin to the very bottom of the bottom slider. (Incomplete insertion may cause troubles.)
- 3. Pull up the upper slider with the left hand.

♦When opening

- Completely pull down the slider until it touches the bottom slider.
- Gently pull out the insert pin with the right hand









Guide to Effective Use of Metal (Copper Alloy) Zippers



1. When Metals Change Color =

Copper alloys generally react with such chemicals as acids, alkalis (bases), oxidizing agents, reducing agents, and sulphides, often forming colored salts. When these chemicals are abundant in adjacent materials, a color change can take place on metal parts, such as elements, sliders, and top and bottom stops or open parts. These chemical reactions occur more readily in hot and humid conditions. For example, if products are pressed after the sewing process with a steam iron and wrapped straight away, or are packed in plastic bags for a long time, this kind of reaction is likely to happen.

Reactive dyed fabric may discolor and sulfur dyed fabric may cause the copper alloy to discolor and stain.

Woolen Knit Products

When metal zippers are attached to bleached woolen knit products, a color change can take place. Generally, woolen products are bleached by the following methods:

- (1) Using an oxidizing bleach (hydrogen peroxide, etc.)
- (2) Using a reducing bleach (hydrosulphite, etc.)

Furthermore, some woolen products are treated with chlorine oxidizers for a shrink-resistant finish.

If sufficient washing or neutralization has not been made after treatment, especially with hydrosulfite or chlorinated agents, gas (chlorine gas or sulfur dioxide gas, etc.) can be generated. These hydrosulfite and chlorinated agents can also react directly on metal in humid conditions. For example, if woolen products are put into bags immediately after pressing and kept as they are, various chemicals and gases will cause a color change on the metal parts of copper alloy zippers.



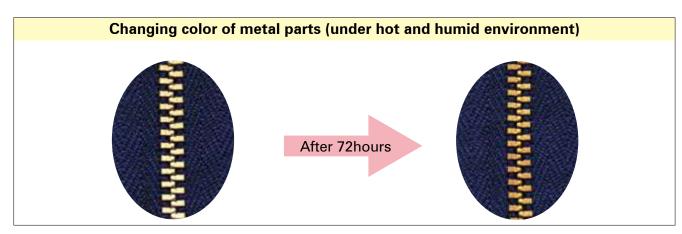
- Use throughly washed, neutralized, and dried woolen fabric.
- Take sufficient time before wrapping after the products are pressed.

Leather Products

A color change can be caused by residual tanning agents or acids used in the leather tanning process. Tanning agents such as sulfuric acid and other mineral acids, chromium compounds, tannic acids, and aldehyde compounds are used. Since the main ingredient of leather is animal protein, leather cannot naturally or easily rid itself of those tanning chemicals, and a large quantity of chemicals often remain. When such leather comes in contact with metal zippers, it can cause a color change in zippers over time in humid conditions.



- Use leather which has been sufficiently washed and neutralized after tanning.
- Conduct preliminary testing.



2. When metal zippers contaminate fabric with certain finishes

■Chemical reaction caused by acidic substances or oxidizing agents

When acidic substances or oxidizing agents remain in the fabric used for products after dyeing or finishing, they can cause chemical reaction on GKB or GK metal zippers and can stain the portion where the zippers are in contact, especially with white or light-colored fabric. Also, the zippers are likely to cause chemical reactions with reactive dyestuff.

= Solutions

- Use material and fabric which has been sufficiently washed and dried after treatment.
- Insert a sheet of paper between the zipper and the garment fabric when packaging.

Transfer of paraffin to fabric, which has waterproof or water-repellent treatment

Metal zipper elements are coated with paraffin to make them work smoothly. When metal zippers are attached to fabric which has waterproof or water-repellent treatment, the paraffin can melt during pressing and transfer to the fabric, staining it.

Solutions

Press with an iron after inserting several sheets of paper or fabric between the zipper and the material.

■Discoloration and color change of cotton products dyed with reactive dyestuff

Reactive dyestuff used for over-dyeing cotton products contains metal ions.

Discoloration or color change of the fabric may occur in humid conditions when the dyestuff reacts with copper alloys used for metal zippers.

Solutions

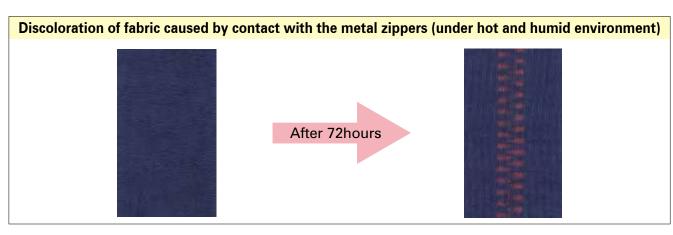
- In case of over-dyeing, dry sufficiently and keep the products in a dry place.
- Avoid sealing the garments in plastic or vinyl bags.
- Avoid warm and humid environments when storing or displaying the garments.

When GKB of GK golden brass zippers are used

The metal parts of surface-treated copper alloy zippers, such as the GKB and KB, can discolor or contaminate adjacent fabric.

Solutions

- Insert a sheet of paper between the zipper and the garment fabric when packaging.
- The possibility of garment contamination can be reduced by specifying a lacquer treatment on the zipper when ordering.





zippers.

Cautions for Aluminum Alloy Zippers



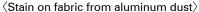
◆ Nature of Aluminum Alloy Zippers

Aluminum is sensitive to acids and alkalis. Please refrain from any post-processing such as stone wash, enzyme wash, acid wash, resin, over-dye, high-concentration bleach, alkali wash, or other washing processes that are chemically based. Aluminum is a soft metal and tends to be easily scraped by friction. Therefore, aluminum alloy zippers cannot be used in combination with copper alloy sliders such as GA/GS type.

1. Possible Staining* from Aluminum Alloy Zippers -

Our standard aluminum alloy zippers (MA/RA) may produce aluminum dust and stain garments during opening/closing operation due to the aluminum's susceptibility to friction. When this aluminum dust combines with paraffin wax (necessary for smooth operation of the zipper), it can result in a dark stain. Particular care should be taken when using aluminum alloy zippers on light-colored garments.

* The stain can be removed to some extent by washing with a conventional detergent.





 \langle Colorfastness to rubbing test of 5RAangle



[Proposed Measures]

- When storing or sewing aluminum alloy zippers, please avoid getting dirt or dust on them.
- When wrapping garments, place a piece of laminated paper between the zippers and the fabric to prevent the fabric from coming in direct contact with the zipper.
- A variation of aluminum alloy zippers with improved durability by anodizing (YAN/RAN) is available. Please contact your local YKK sales representative.

2. Element Damage

Jackets and pants are often washed during the finishing process. Aluminum is susceptible to acids and alkalis and it has been reported that strong acidic or alkaline solutions can dissolve the elements of aluminum alloy zippers, resulting in the elements disengaging. Please use special caution when using strong acidic or alkaline chemicals. Be sure to immediately and thoroughly rinse off any chemicals used in the finishing process.





(Proposed Measures)

- Avoid high temperature, prolonged, or repeated treatment with strong acid and alkaline chemicals.
- If the chemical gets on the zipper elements, immediately rinse it off with a sufficient amount of water before drying.
- If detergent comes in direct contact with the zipper elements, it may cause zipper damage. When washing garments, first add detergent and sufficient water to the washing machine. Then add the garments.
- Do not leave the garment soaking in water. Wash immediately after use and rinse off the detergent completely.

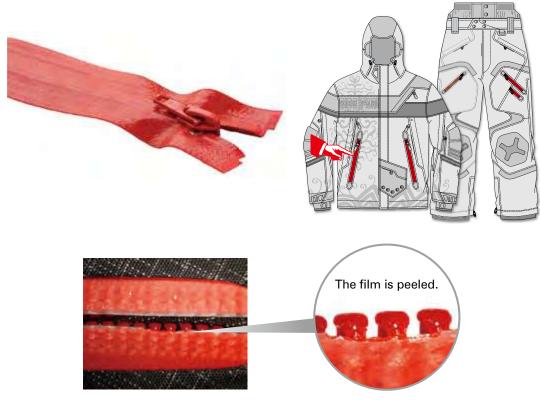
It is highly recommended to test a zipper before bulk production.

Care for AquaGuard® Zippers

- This zipper is not waterproof/watertight, but water repellent.
- Keep the zipper away from direct sunlight. UV rays may cause a yellowing of the PU (Polyurethane) film.
- The zipper must be completely closed when washing in order to avoid damage.
- Do not iron the zipper.
- A petroleum based dry cleaning solvent is recommended. Chlorine based solvents often result in difficulty in operating the zipper, color runs, or result in cloudy film.
- Tumble drying in a dryer may cause damage to the laminated film and result in the deterioration of the zipper's water repellency.
- Two PU zippers of contrasting color should not be used in a garment if they come into contact with each other for prolonged periods of time (storage, folding, etc.), since this may cause a color run.

Cautions for thermocompression bonding -

During thermocompression bonding to fabric, the film is softened. If the slider is moved under this condition, there is a risk that the film on the tape partition will be lost.



<Example>

Solutions

To prevent it, please wait until the temperature becomes appropriate.

Care for AQUASEAL® Zippers

1. Care Instructions =

- Please consult with YKK representatives in regard to the usage of AQUASEAL® products.
- Overstretching of the top and bottom stops should be avoided. A reinforcement strap feature is available.
- Slowly move the zipper when operating. Angular pulling may cause element mis-engagement and may result in poor waterproof performance or damaged zippers.
- Folding or crushing the zipper may affect its performance.
- Regular cleaning with fresh water and use of a suitable lubricant is advised in order to prevent damage to the tape and seals.
- Store away from heat and moisture.
- Do not dry clean or machine wash.
- Prevent solvents and adhesives from adhering to the elements.
- Plastic sliders, due to their material characteristics, may become damaged when they are exposed to a strong impact, so please handle them carefully.

2. Attachment -

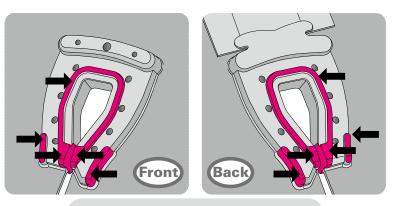
- ① Sewing: In order to prevent the entry of water through seams made by sewing machine, both the front and back faces of the seams must be blocked with seam tape or something similar.
- ② Gluing: It will depend on the compatibility of fabric, zipper tape and glue.
- 3 Hot melt: Thermosetting tape is also available.
- (Welding: Can be welded at high frequencies (welder) and using heat (hot air).
- *We recommend that you attach products to fabric materials such as PU and PVC fabrics.
- *Please carefully check compatibility of the product and fabric when attaching using adhesive or via hot melt or welding.
- *For details on attaching products, please contact YKK representatives.

3. Maintenance

- Regular maintenance, such as cleaning, is recommended for maintaining products' waterproof features.
- We offer the "ZIP TECH™" which is dedicated lubricant for AQUASEAL® for maintenance purposes (sold separately).
- Insufficient lubricant may be a cause of a decline in waterproof performance, so we recommend applying this regularly.
- *This only relates to the W-SEAL top stop. (See the figure below for the application position.)
- *Applying paraffin (wax) to the elements can maintain zippers to be opened/closed smoothly.







Lubricant application position

Care for PROSEAL® Zippers



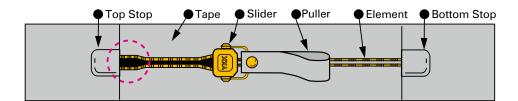
- Close the zipper till the slider completely touches the stop to ensure tightness.
- When opening or closing, always ensure that the direction of the pull is along the line of the metal elements. When closing, ensure that both sides of the open zipper are parallel. It is very important to avoid catching undergarments in the elements. If the slider should jam during closure, DO NOT FORCE IT. Pull back the slider, remove the obstruction, and slowly attempt to close it again. Excessive force will break the metal chain and destroy the zipper. Also avoid bending the zipper excessively as this will eventually cause the metal chain running inside of the zipper to break.
- As for PVC tape, do not use in an environment where the water temperature is under 10°C, as the PVC will harden and it will affect the zipper's performance.
- Due to the characteristics of PVC, its tightness will deteriorate over time.

2. Cleaning •

- After using the zipper, it should be rinsed in clean water. Any objects (sand, mud, etc.) found in or outside
 of the elements before operating the zipper may result in poor tightness or may damage the zipper.
- Do not dry clean, machine wash, or iron.

3. Maintenance

Occasional cleaning and lubrication of the elements after use is desirable. Such treatment is especially
important if PROSEAL® zipper is used in a dirty or corrosive environment. After rinsing with fresh water,
please lightly apply a lubricant such as paraffin to the part of the elements circled in red in the diagram
below. After opening and closing the zipper several times, excess paraffin flakes should be removed.



4. Storage

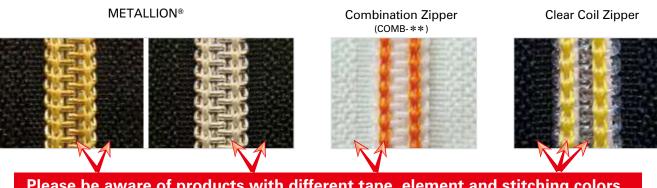
- Store with the zipper <u>completely open</u>, taking care not to bend it. Storage of the zipper in a closed position for long period will cause malformation of the sealing areas. Also, storing it partially opened will cause the zipper to bend. Slight leaks are possible in such cases.
- Do not place any heavy object on the zipper.
- Prolonged contact with such surface materials as PVC or synthetic leather causes the PVC to react with their processing additives, which causes color migration (color transfer). Avoid direct contact when storing by placing a sheet of paper between the zipper and the material.



METALLION®, AUROLITE®, Combination Zippers, Clear Coil Zipper Caution When Washing and Dry Cleaning

Coil zippers where the tape is stitched to the elements after being dyed, such as Metallion®, Combination or, Clear Coil zippers, are more prone to twisting in comparison to standard coils when being subjected to hightemperature drying during washing and dry cleaning.

Supported Items ·

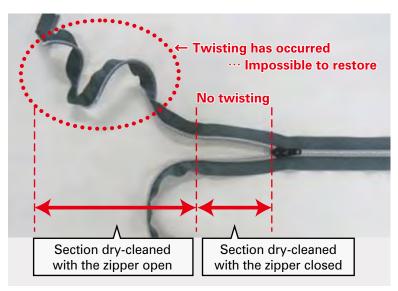


Please be aware of products with different tape, element and stitching colors.

Twisted Condition -



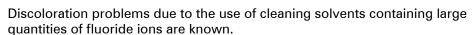
Reproduction Test via Dry Cleaning



Solutions

- Always close the zipper during washing and dry cleaning, and set the temperature to be under 100℃.
- *Depending on the shrinkage rate of sewn material, the conditions will change slightly.

Discoloration problems caused by cleaning solvents



Experience suggests that solvents causing discoloration contain hydrogen fluoride (a strong acid), sulfuric acid, etc. These materials cause the following problems:

- Discoloration or corrosion of sliders and top and bottom stops made of metal, and fittings
- Decolorization of plastic parts of VISLON® zippers

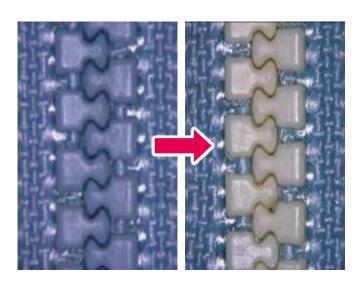












In addition to commercially-sold fluorine solvents, unique cleaning solvents in which detergent is mixed with cooking vinegar - itself a strong acid - are also used. These types of solvent may remain on product fabric and directly or indirectly affect the quality of the zippers used. Problems particularly arise in products comprising light colored fabric.

Garment factories should be instructed to use appropriate cleaning agents that do not include corrosive substances.

If you have any questions related to the appropriateness of cleaning agents, please consult with YKK representatives.

Tips when ironing or pressing

When ironing or pressing garments that uses fastening products, please keep in mind of the followings in order to avoid unexpected damage or deformation.

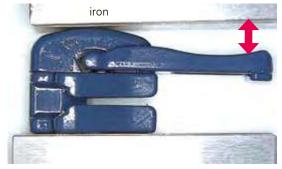
All zippers •

Close the zipper and be sure to use a protective cloth in order to prevent the iron from coming in direct contact with the zipper.

We recommend that you avoid ironing on or around the slider. If it is necessary to iron near the slider ensure the pull-tab is flat and in line with the elements.

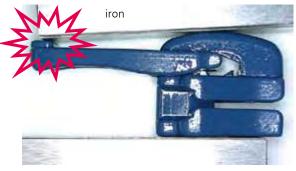
■ Example: Correct direction of the pull-tab

ONormal position



The space is large as compared to when the pull-tab is inversely positioned.

X Inverse position



There is no difference in the height between the body and the pull-tab, which tends to place a strain on the pull-tab.

■Examples of damaged pull-tab / crushing



Bent pull-tab

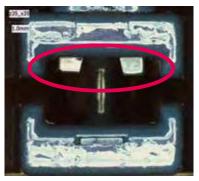


Cracked slider



Crushed slider

All-plastic slider



Locked Position



Unlocked Position

If sliders are left in a high-temperature environment with the lock pin raised, gradually the pin may deform if a load is intermittently applied.

The spring section may become deformed and lose its springiness, which may cause poor locking, so care is required.

VISLON® / Coil Zipper -

When exposed to a high temperature, the elements may deform or melt. Be sure to use a protective cloth when ironing garments with a zipper. Note that deformation may occur if the top / bottom stop or slider is made of plastic.

Examples of deformation and melting





■ Maximum iron temperature

(Pressure 1.5 kg, 10 seconds still) VISLON® Zipper 130°C Coil zipper 160°C



Melted VISLON® elements

Melted slider

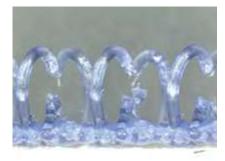
Melted top stop

COSMOLON® -

Be sure to iron materials from their back surface or use a protective cloth if you need to iron the front surface in order to prevent the iron coming into direct contact with the hooks or loops. Heat and pressure may stretch or crush parts which may lead to poor engagement (decrease in strength).

■ Cases of elongation and crushing

O Hook in normal state







X Hook elongation



O Loop in normal state



X Crushed loop



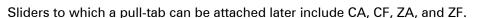
The countermeasures and cases introduced here refer to the major problems envisaged in normal usage/ sewing methods. It is not guaranteed that these measures can avoid all problems.

These cases may not apply to zippers used for special purposes or ones that sewn or attached in a special way. Be sure to consult with YKK representatives in advance and conduct full testing on your own in order to judge whether the product can be used or not.





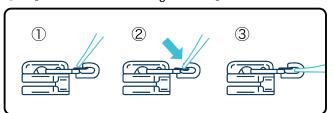
Sliders to which an accessory pull-tab can be attached later



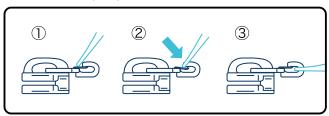
●CA / CF - types in which a pull-tab can be attached to the small snap hook attached to the slider

Choose a type of pull-tab with an attachment part designed specifically for CA / CF. Attaching a non-standard pull-tab may damage the swivel hook.

CA [with automatic locking function]



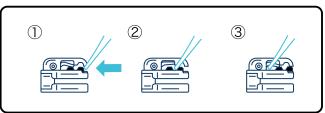
CF [non-lock (free)]



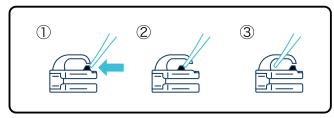
ZA / ZF - types in which a pull-tab can be attached directly to the slider body -

Choose a type of pull-tab that is compatible with ZA / ZF. Attaching a non-standard pull-tab may damage the slider.

ZA [with automatic locking function]



ZF [non-lock (free)]



Pull-tab for CA/CF







Pull-tab for ZA

Pull-tab for ZF







*The items above are just examples.

Notes for using sliders to which a pull-tab can be attached later •

In addition to the ones listed above, there are some types of sliders to which a pull-tab is attached using a tool such as DADC, DFDC, and DFNT2. Attaching a pull-tab may affect product functions or appearance depending on the pull-tab's dimensions and how it is attached.

Please thoroughly understand the following before use.

- When creating a pull-tab, please make an inquiry to YKK representatives about the shape of the attachment and other issues.
- Do not perform any rework such as removing a pull-tab that has been attached once.
- We do not recommend using coated products (such as some plated products) with a high possibility of peeling off during processing or use.

Please understand YKK takes absolutely no responsibility for the change in quality and performance of its products caused by parts manufactured by a third party other than YKK or processes carried out by a third party.

Remarks for Clear Coil Zippers

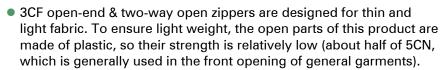


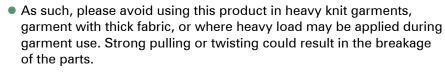
- The crosswise strength of the tape is slightly lower than that of standard tape.
- Wash with water temperature under 40°C to prevent the nylon transparent tape from shrinking.
- Cover with fabric when ironing, at a low temperature between 80°C and 120°C.

Remarks for VISLON® Transparent Type

- Specify petroleum dry cleaning only.
- Chain strength is a little weaker than that of the standard item, so it is not recommended for an application with heavy load.

Proper Use / Sewing of 3CF Open-End and Two-way Open Zippers







Do Not twist the open parts.

Also please note the following precautions for proper handling in order to avoid unnecessary damage or breakage.

1 Zipper Operation

♦When Closing

- 1. Make sure the slider is positioned next to the box.
- 2. Completely insert the pin into the box end.
- 3. Pull up the slider.

♦When Opening

- 1. Pull the slider all the way to the open parts.
- 2. Draw the separable pin out.

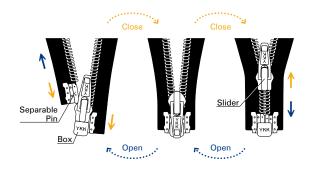
2 Ironing

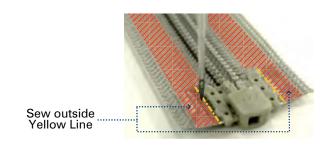
- 1. Completely close the zipper and cover with a piece of fabric.
- 2. Ironing temperature should be below 130°C.
- 3. Be careful not to accidentally iron the plastic parts.

3 Sewing

Sew outside the yellow line. (- - - -)

Do Not sew on the plastic part.





Proper Sewing Procedure for Zippers

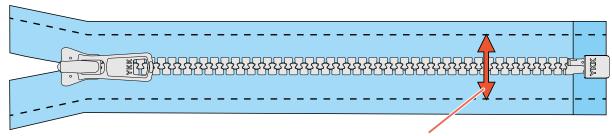
Space for Slider -

The slider needs some room to move for the zipper to work.

If the stitch is made right by the edge of the elements, the slider will easily catch the adjacent fabric.

Please make sure to allow enough space for slider operation.

Lining fabric especially gets easily caught in the sliders, so sew on the part away from the elements and secure the edges with a sewing machine or prick stitch if a lining is used.



Allow enough space for slider operation.

Sewing Long Zipper

To confirm the compatibility between the fabric and the zipper, tack the zipper onto the fabric before actually sewing on the fabric to check their elongation and so on.

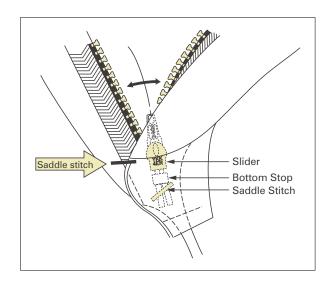
Knit fabric especially requires this preliminary check.

Sewing onto Shaggy Fabric (Fur, Shaggy, etc.)

When applying zipper onto shaggy fabric, place cover fabric such as leather at the edges in order to prevent the slider from catching the fabric.

Sewing Zipper on Pants Flies

Saddle stitch can reduce the load on the bottom stop. Pants using a short zipper or tight-fitting pants especially place great load to the stop, so applying the saddle stitch is strongly recommended.

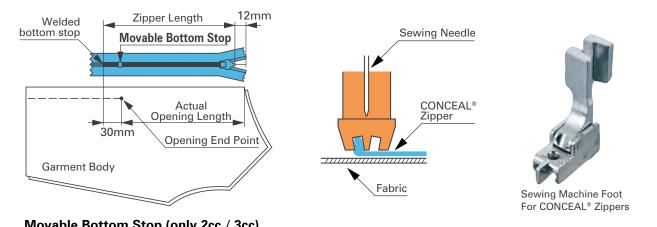




Sewing CONCEAL® (Closed-End) Zipper onto Fabric

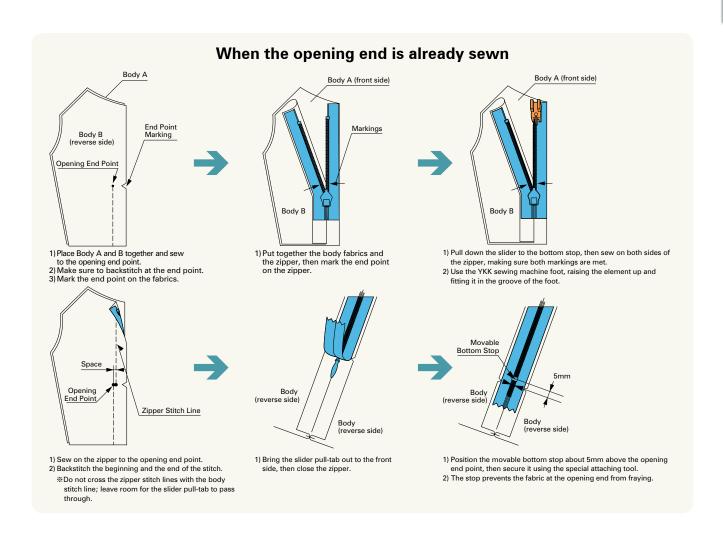


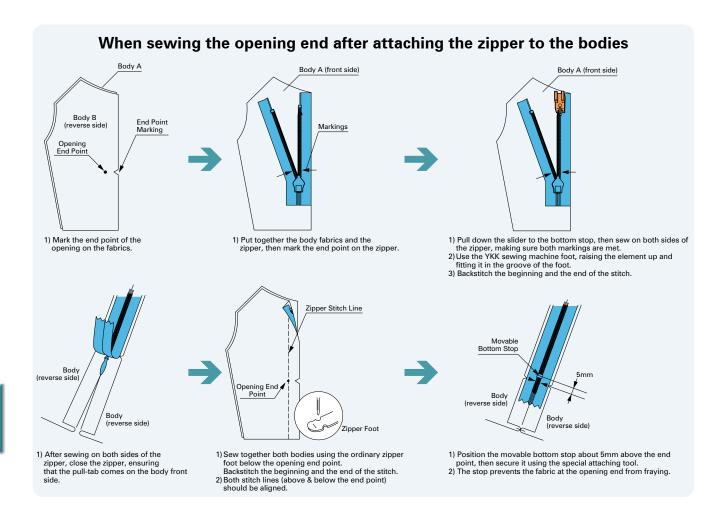
Prepare a zipper approx. 30mm longer than the actual garment opening.



Movable Bottom Stop (only 2cc / 3cc)

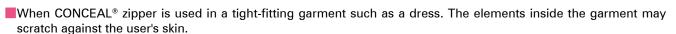
The movable bottom stop is provided to prevent fraying of the fabric at the opening end. Fraying by the slider movement can be prevented by fixing the stop about 5mm above the opening end point with a special attaching tool.



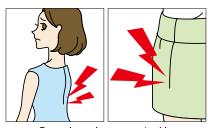




Precautions on Sewing CONCEAL® (Closed-End) Zipper









The dress turned inside out

Bottom end of the elements

Scratch against a user's skin

May raise the nap of undergarments



Please wrap the part below the movable bottom stop in a fabric backing or put a patch to prevent the elements from scratching against the user's skin.







A Patch

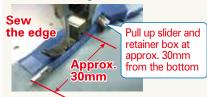
Sewing CONCEAL® (Open-End) Zippers

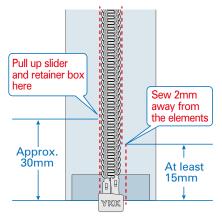


3CH =

Sewing on the Retaining Box Side

- Start sewing from the top of the zipper using the YKK sewing machine foot, to about 30mm from the bottom stop.
- Pull up the slider and the retainer box at approx. 30mm from the bottom, and then continue sewing beside the element edge.





Sewing on the Insert Pin Side

- Start sewing from the top of the zipper using the YKK sewing machine foot.
- At least 15mm from the bottom stop, switch to a narrow foot and sew at least 2mm away from the elements to the bottom.



Attention

Preferred sewing conditions
Sewing Pitch: 2.5mm
Backstitch: 1 backstitch

Sewing pitch that is too small and repeated backstitches will cause the tape to break.



Attention

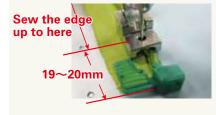
Sewing on the very edge of the insert pin may make it difficult to insert the pin into the slider.



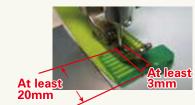
5CH -

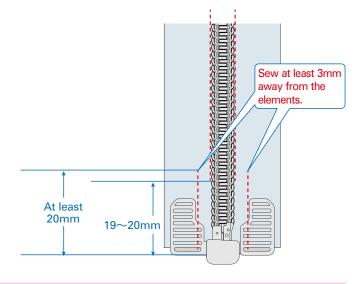
Sewing the Retaining Box Side / Insert Pin Side

 Using the YKK sewing machine foot, sew right beside the element edge until the point approx. 19~20mm from the bottom.



 Switch to a narrow foot and move slightly (over 3mm) away from the elements, then continue sewing to the bottom.



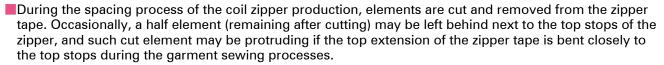


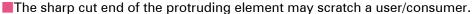
Attention

Sewing the very edge of the open parts may cause the open parts to break.



Precautions for sewing Coil Zippers









Solutions

- The top extension(s) of the zipper tape should be bent at least 5mm away from the first element (at the top stop position). This would prevent the elements from protruding.
- Selecting the P-TOP (plastic top stops) products can prevent the exposure of sharp cut element, and is highly recommended for infants' / kids' garments.





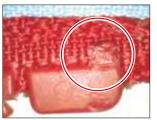




Warnings and Requests When Sewing the P-TOP

When stitching the zipper, if the sewing machine attachment or feed dog comes in contact with the top stop and damages it, it could create a jagged edge which can lead to injury.

Example of such damages:









VISLON® (NEWKOB4) damage example

Coil zipper (P-TOP) damage example

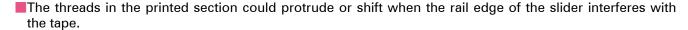
Solutions

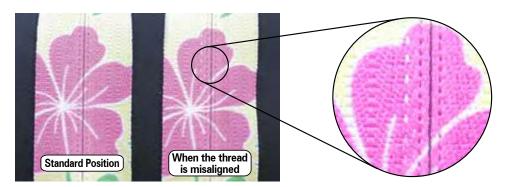
Please be mindful that the sewing machine attachments or feed dogs do not come in contact with the top stop when sewing near the top stop or the top extension.





Caution When Sewing PRIFA® Zippers





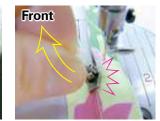
When sewing PRIFA® zipper, the tape thread may get misaligned if excessive force is applied on the print part by the bend created by the slider.

The cause of the tape thread's misalignment:

When sewing with the zipper opened, the sewer will need to move the slider as they sew. The slider will not move smoothly if the stitchings are too close to the elements, and the rail edge of the slider will interfere with the tape, leading to floating or misaligned thread on the print.









Solutions

- 1) Please select an area for proper stitching that allows for smooth slider operation.
- 2When moving the slider, please raise the sewing machine foot.
 - · In particular, the slider rail edge tends to interfere when closing the zipper.



Raise the sewing machine foot

Attention

Please refrain from using fixtures such as perforators when moving the slider, as it may cause paint and chrome plating to peel off or create sharp edges.

Zipper Problems and Solutions Q & A

#	Q	А
1	I used the No. 3 zipper with a thick material, which caused punctures and breakage in the open parts.	●When using thick materials, please use zippers above No. 4.
2	The zipper open parts broke.	For open-end zippers, confirm that the insert pin is firmly inserted when pulling up the slider.
3	Is there anything in particular to be cautious about with the open-end No.3 coil zipper (3CF)?	 The 3CF has fine elements, so even if the insert pin is not inserted firmly into the box, it is possible to pull up the slider by force, in some cases damaging the open parts rib support. This is especially the case if the fabric around the insert pin is ribbed, making it difficult to operate, or the zipper is long, making it difficult to see the ends while operating it. When sewing, do no sew over the open parts rib support.
4	The front zipper of a garment comes down on its own.	 Use an automatic slider (DA), which locks when not operated. Using a pull-tab that is too big or heavy could lead to the slider being unlocked or breaking while walking.
5	Post-processes such as washing or bio-stonewashing discolor or corrode the zipper, damage its slider or cause it to transmit its color.	 We recommend YG type and GS type zippers, which have superior durability to post-processes. Among the element colors, be particularly cautious with GK, GKB, GTH and GDS. In order to avoid secondary damages from the residual chemicals used in post-processes, make sure to adequately neutralize, rinse, and dry quickly.
6	The zipper used on wool and feathered products changed color.	•Wool and feathered products are susceptible to residual chemicals such as bleach, causing the metal part of the zipper to react and become discolored or corroded in storage. Neutralize adequately, and select items not easily susceptible to the influence of residual chemicals such as VISLON® zippers and coated sliders.
7	The metal part of the zipper was discolored.	 Metal parts may corrode depending on the storage condition. There is a risk of the corroded parts staining the product, so products should be kept at low humidity, avoiding hermetically sealed storage in plastic bags or cardboard boxes and allowing some breathability in storage (please be aware of the influence of NOX as well). Do not use rubber bands to tie zippers together, since the sulfur in rubber bands can cause the elements to corrode or discolor, or cause the tape to turn yellow. (This problem occurs even when the rubber band is used over a plastic bag.) The use of cleaning products containing fluorine, or contact with fabric on which such cleaning products has been used causes metal parts to be discolored. Please be cautious of this. We recommend EVERBRIGHT®, which is comparatively resistant to discoloration.
8	The part of the garment that is in contact with a metal zipper became dirty.	●The element surface of the metal zipper is coated with lubricant. The lubricant itself is colorless and transparent, but the metal powder (element shaving) created by opening and closing the zipper, as well as dust, etc. adhering to the lubricant, may contaminate the fabric if these are transmitted along with the lubricant upon contact with the fabric. Be cautious when using metal zippers with light-colored fabrics or absorbent fabrics. When ironing (with steam in particular), be aware that the same effect may occur. ●For storage, line the parts that contact the metal zipper with paper.
9	Skin contact with the zipper caused an allergic reaction.	Some elements and slider surface types contain nickel. Please select nickel-free products (special specification: N-ANTI).
10	While sewing, the sewing machine needle or attachment damaged the top stop and created a rough edge, causing injury.	●The area around the top extension comes into contact with sewing machine needles and attachments from a variety of directions. In order to prevent damages, lower the starting position of the zipper by 5mm and compare the result. (See p64)
11	When opening and closing the zipper, it does not move smoothly or it catches the fabric.	 When sewing, if the stitching is made too close to the elements, the slider will not have enough space to move, impeding its operation. Be careful to allow enough space (See p51). If the zipper catches because the fabric used is too thin or soft, you should put in a stitch or core to reinforce it.

#	Q	A
12	The zipper tape tore from the sewing position and broke.	●The zipper tape is woven, so cutting the thread may cause fraying. Do not cut the zipper tape to reduce fabric pressure, to reduce interference from other parts, etc.
13	The elements warped or melted when I ironed it.	 When applying an iron to the zipper, be sure to cover it with fabric. Be cautious of the zipper's heat tolerance (and the heat tolerance of the product itself). Zipper heat tolerance: CONCEAL® 160°C FLATKNIT® 150°C VISLON® 130°C Coil Zippers 160°C
14	A VISLON® element has broken or cracked.	 If you try to open a slider with lock function by force without using the pull-tab, the elements may get torn off. When opening or closing the zipper, be sure to use the pull-tab. The material of the elements, polyacetal (POM), makes the elements susceptible to damage by strong acids. Do not clean the elements by soaking it in bleach, and if exposed to materials such as toilet cleaner or battery acid, be certain to wash it with water immediately.
15	The zipper was bent in dry cleaning.	Repeated dry cleaning or high-temperature drying without closing the zipper will cause it to bend. Be sure to close the zipper before washing, drying, or dry cleaning. (See p54)
16	The CONCEAL® no longer opens or closes.	 If the slider is pulled up diagonally, the elements will warp and disrupt the interlocking mechanism, and it will break if it is forced up further, making it impossible to open or close. When closing the zipper, first fasten the button/hook, and pull up the slider along the elements so that it doesn't get pulled diagonally. Zippers are intrinsically hard to operate where fabric thickness changes, so do not use a CONCEAL® where fabric thickness changes.
17	The seam of a coil zipper for a bag broke.	●There have been instances where seams break due to repeated contact with other parts of the bag, such as shoulder belts. Please be mindful when attaching other parts.
18	When using a pin lock (DP) slider in my pocket, the protruding part hurts.	Avoid the use of a pin lock slider, and use an automatic lock slider (DA) or non-lock slider (DF) instead.
19	We used an automatic lock slider (DA type) for a product that goes through a washing process, and the slider broke.	●The pull-tab of the slider may break when it gets stuck within the tumbler, and chemical residue in the cover can corrode the slider. Please use the semi-automatic slider (GS), which is more durable and has a more suitable shape.
20	The paraffin melted from the heat from an iron press and blemished the clothing material.	• The zipper elements are treated with paraffin in order to improve its sliding properties. When ironing areas directly touching the zipper, use a slip-sheet or fabric between a material and the iron.
21	Is there something I should be aware of when using a zipper for baby products?	•We provide special products for babies, such as the plastic top stop. Please contact a sales representative.
22	The slider caught the material and tore a hole in it, or the zipper won't close because it caught the material.	 Try to pull the slider the other way, as to loosen the caught material. **This may cause the pull-tab to break, so do not try to force the slider to move. Instead, try moving it gently.
23	When I sent my clothes off for dry cleaning, the press broke the slider.	•We have provided guidance to the cleaning industry to be careful with the sliders when pressing.
24	When I stored the zipper by tying them with a rubber band, the portion touching the rubber band changed colors.	●The sulfur in rubber bands can cause the element to corrode, discolor, or cause the tape to turn yellow. Please refrain from using rubber bands, and use paper or cotton string instead. The same can occur for Cosmolon® as well.
25	The color of the zipper rubbed off onto my bag.	 Contact with plasticizers, adhesives, and oils can cause the colors to rub off. Please be particularly aware of PVC, synthetic leathers, resin coated fabrics, etc. Please store with a slip-sheet.

Snap Fastener and Button Products Three Basic Principles



High Quality Products

YKK products are made of highly qualified selected materials under strict production testing.

High Performance Attaching Machine

YKK has a variety of high performance attaching machines, from manual to programmed types. They all possess a compensator device. Please refer to page 66.

Appropriate Technical Advice and Customer Service

With skilled Field Technical Support members, called FTS, appropriate technical advice and follow-up service are available.

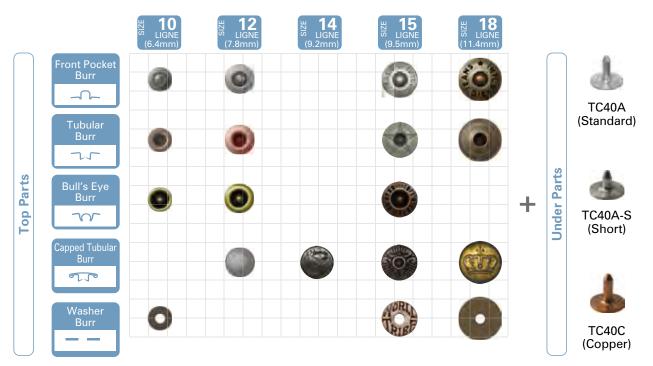
Tack Button

■ Special designs, personalized logos, and variety of finishes are available.



Rivet & Burr

■ Special designs, personalized logos, and variety of finishes are available.



Snap

- Special designs, personalized logos, and variety of finishes are available.
- Combination of top and under parts can be chosen from our lineup.

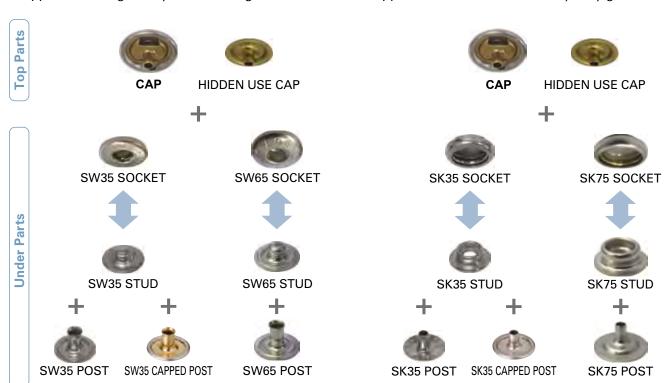


S-Spring Snap - (Item code: SW)

Applicable for light-duty to standard garments.

Ring Spring Snap = (Item code: SK)

Applicable for standard to heavy-duty garments.



*Hidden use caps are also available for designs with concealed snaps.

Ring Spring snap (Two-prong)

(Item code: SX)

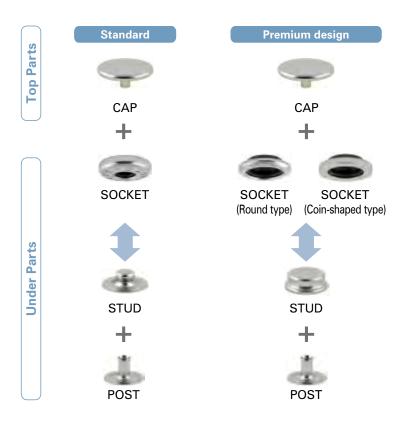
- The two-prong attaching system is one of the most historic methods around.
- With this feature, this snap system possess the means to minmize fabric damage and prevent rotation.



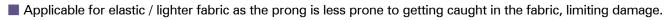
*Hidden use caps are also available for designs with concealed snaps.

Metal-Plastic Composite Snap

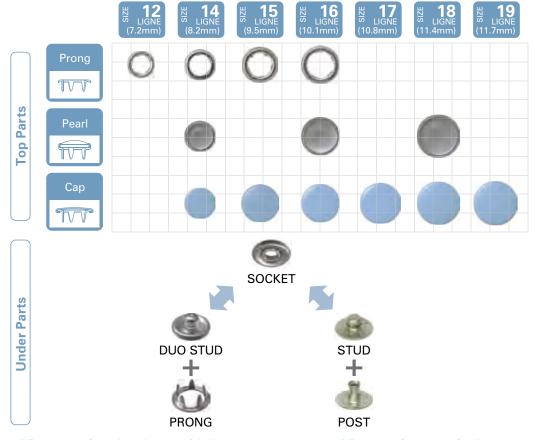
A snap system that shows high performance and durability due to its plastic spring increasing its resistance to abrasion.



SNAPET®



- Special designs, personalized logos, and variety of finishes are available.
- Dye-to-match to Prong and Cap are available.



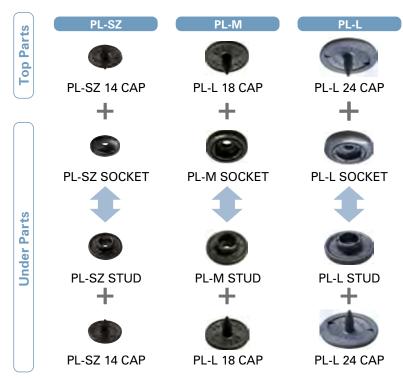
*Prongs are for knit and woven fabrics.

%Posts are for woven fabric.



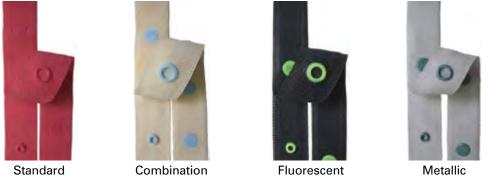
Plastic Snap

- Good for lightweight application.
 Dry-Cleanable.
 High Durability.
 Self-Piercing.
- Metallic colors are available to match a METALUXE® zipper.



Tape Snap

- SOFIX® snap button is a tape snap which has plastic injected directly onto the tape.
- No need for attaching machines.
- Combination of Socket-Stud tape is available. (Usage example: for comforters, to fasten the ends of the comforter cover.)



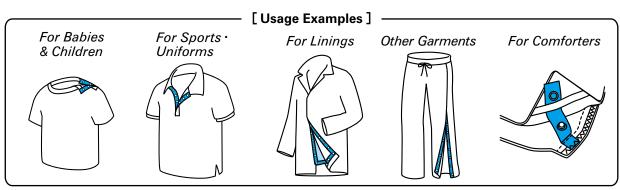
Snap Diameter: 8mm

Snap Interval: 15mm, 30mm, 45mm, 60mm, 75mm, 90mm

Standard Colors: YKK Asian Group Color Card

Width of Tape: 20mm Sales Unit: 50m

Special Colors: Dye-to-match is available



Metal Sew-On Button

- Light weight press button.
- The hole is designed to prevent it from cutting the thread.
- Special designs, personalized logos, and variety of finishes are available.











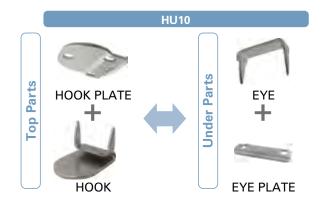
Hook & Eye

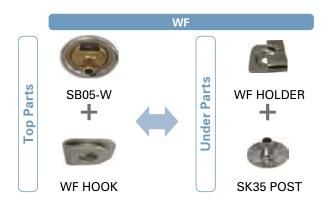


Waist Fastener

Suitable for slacks, dress pants and skirts.

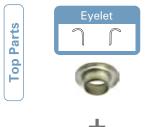
Suitable for children's pants.





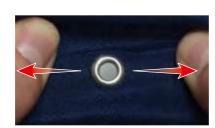
Eyelet Washer











- Attachment to stretch fabrics is possible.
- Pre-piercing is not required.

Attaching Machine

MODEL 131



The Model 131 is a manual foot press type for low-volume production, and it can be used with most YKK® snap fastener items by changing the dies.

■Specifications

Dimensions: 1.000mmH×460mmW×425mmD

Std. Equip. : Compensator

MODEL N-6



The N-6 is a semi-automatic attaching machine with powered foot treadle, and it can be used with most YKK® snap fastener items by changing the dies. Marking Light is equipped for easy positioning of attachment.

■ Specifications

Dimensions:1.080mmH×340mmW×450mmD

Power :200W Motor

Electric Source: 100V or 220V Single Phase

Weight :68kg

Std. Equip. : Compensator / Safety Device

Marking Light

MODEL N-7



This is an automatic model exclusively for Tack Button, Rivet Burr or Eyelet Washer. Register type is also available to fix logo direction.

■Specifications

Dimensions:1,340mmH×500mmW×560mmD

Power :300W Motor

Electric Source: 100V or 220V Single Phase

Weight :130kg

Std. Equip. :Compensator / Safety Device

Marking Light /

Automatic Feeder(Register Type)

MODEL N-8



This is an automatic model exclusively for SNAPET® snap buttons or Snap. It comes in a set of two units, one for attaching prong and socket and the other for stud and post (or stud and prong).

■ Specifications

Dimensions:1,340mmH×500mmW×500mmD

Power :200W Motor

Electric Source: 100V or 200V Single Phase

Weight :110kg

Std. Equip. :Compensator / Safety Device

Marking Light /

Automatic Feeder / Gauge Plate

MODEL N-8-3H



This is an automatic model for SNAPET® snap buttons which allows you to choose the attachment order for 3 component SNAPET® snap buttons.

Specifications

Dimensions:1,340mmH×500mmW×500mmD

Power :200W Motor

Electric Source: 100V or 220V Single Phase

Weight :120kg

Std. Equip. :Compensator / Safety Device

Marking Light / Automatic Feeder

Gauge Plate /

Attachment Order Programming

MODEL N-8-4H



This automatic model allows you to program 4 components of SNAPET® snap buttons.
Combination of different surface finish of Prong with Socket and Prong with Stud can be registered.

Specifications

Dimensions:1,340mmH×500mmW×500mmD

Power :200W Motor

Electric Source: 100V or 220V Single Phase

Weight :130kg

Std. Equip. :Compensator / Safety Device

Marking Light / Automatic Feeder

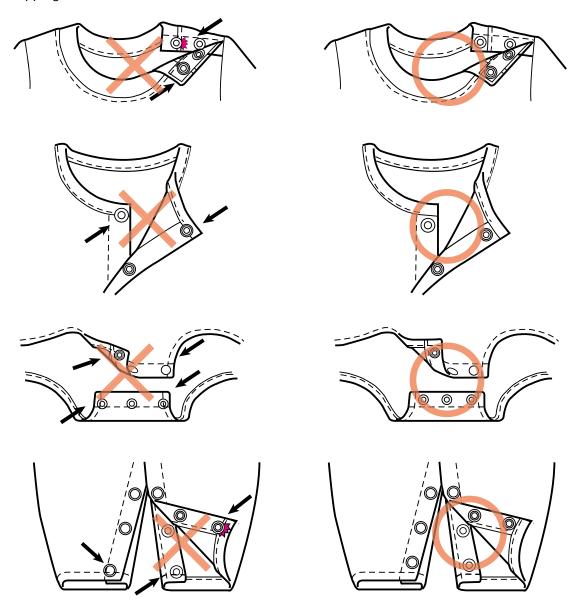
Gauge Plate /

Attachment Order Programming

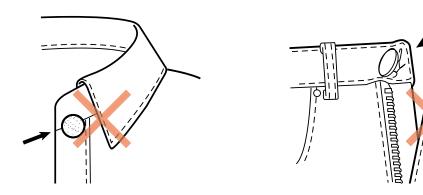
Attachment Guide

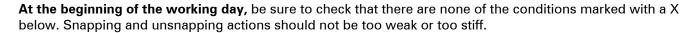
Make sure to avoid attachment on uneven thickness, hem, and stitch.

Attachment on uneven thickness may result in defective attachment, breakage of fabric, or weak snapping and unsnapping actions.



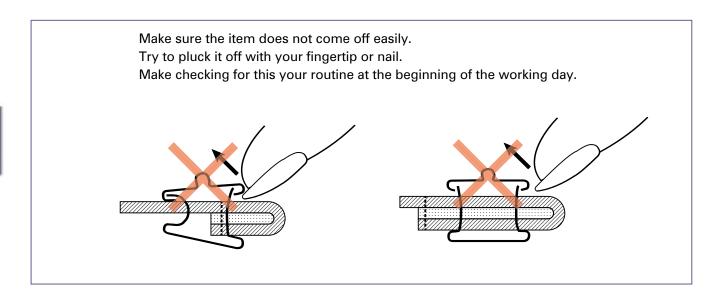
If a sewing pattern requires attachment on a particularly thick foundation, please contact your nearest YKK sales office.

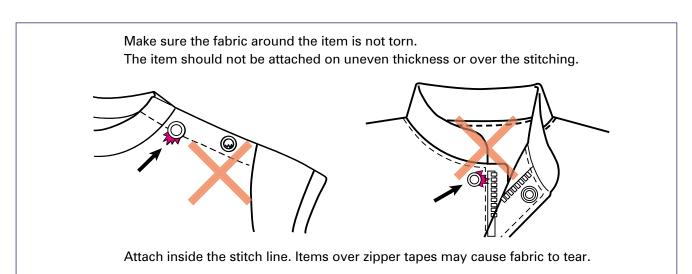




Make sure the item is not turning and there is no damage or deformation.

The item may turn around if the fabric is too thin. Packing is required in this case.

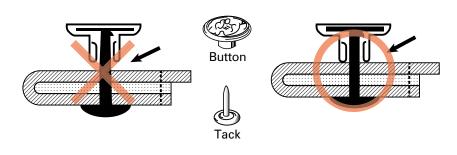




During the attachment and inspection processes, be sure to check that there are none of the conditions marked with a X below, which may cause the fabric to tear or the items to come off.

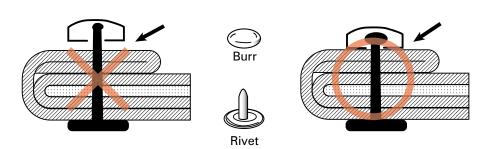
Tack Button -

Make sure there is no gap between the fabric and the Tack Button, and confirm they are firmly attached.



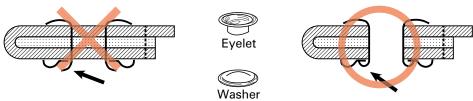
Rivet & Burr -

Make sure there is no gap between the fabric and the Rivet & Burr, and confirm they are family attached.

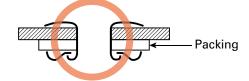


Eyelet Washer =

Make sure the tip of the Eyelet is properly curled, and confirm that the fabric does not slide off the attached Eyelet with a little pulling force.

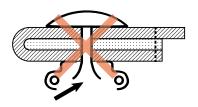


Use some packing if the fabric is too thin.



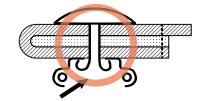
Snap •

Make sure the tip of the Cap is properly curled.

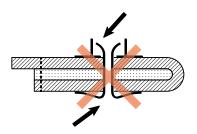






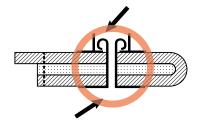


Make sure the Stud and Post are firmly attached.



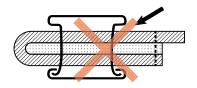






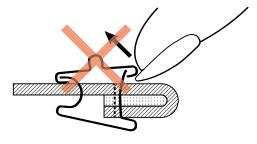
SNAPET® -

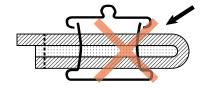
Make sure there is no gap between the fabric and SNAPET®, and confirm the SNAPET® is firmly attached.









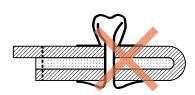








Make sure the bottom of the SNAPET® Post is flat.



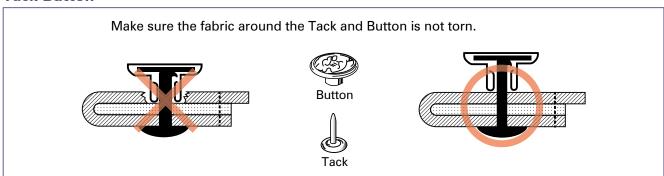




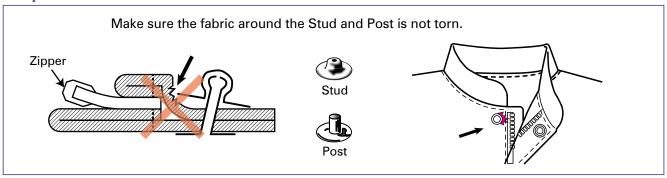


Before packing your garments, make sure to check that there are none of the conditions marked with a X below.

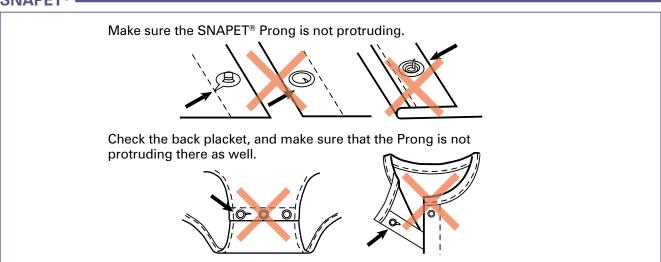
Tack Button -



Snap ·



SNAPET®



Eyelet Washer -Make sure that the attachment pressure is not too strong and the fabric is not torn.

Snap Fastener and Button Products Attachment and Inspection Guides

Key Inspection Points

YKK Snap Fastener and Button items are made of various materials, and they may be vulnerable under certain conditions. See the following notes and prevent unnecessary problems.

Finishing •

1. Ironing:

Do not iron directly on to the items. Direct ironing may cause scratches and deformation on metallic items and breakage or distortion on plastic items. If ironing is essential, place a fabric over the items and keep the appropriate temperature and avoid direct ironing.

2. High-Impact Press:

Problems such as deformation, breakage, stiff or weak snapping-unsnapping actions may occur, if the pressure is too strong.

3. High-Temperature Drying:

Plastic items, under high temperature, are less resistant to deformation, discoloration, and scratches.

Dyeing and Washing -

Heavy chemicals used in the processing of fabrics or garments tend to affect metallic items, especially when they are not sufficiently rinsed and dried.

1. Sulfur Dyestuffs:

Sulfur dye process can result in corrosion on protective lacquer on all finishes, resulting in possible corrosion of the trim and/or staining on the garment fabric. As such, YKK recommends wash testing under bulk conditions before production.

2. Reactive Dyestuffs:

Reactive dye process can result in corrosion on all metal trims, especially under extreme or prolonged humid conditions. Resulting in possible corrosion of the trim and/or staining on the garment fabric. As such, YKK recommends wash testing under bulk conditions before production.

3. Dyeing On Garment:

YKK recommends all metal trims to be attached after the fabric dyeing process. This is to avoid any possible chemical reactions that can result in corrosion of the metal trim and/or staining on the garment fabric. If required to be attached before the dyeing process, please test under bulk conditions before production for variation approval.

4. Bleaching:

YKK recommends all metal trims to be attached after the bleach wash process as it can cause chemical reactions resulting in fabric failure, corrosion, and/or discolorations. If required to be attached before the bleach wash process, please test under bulk conditions before production for variation approval.

5. Stone Wash:

YKK recommends all metal trims to be attached after the stone wash process as it can cause abrasion and corrosion on metal trims. If required to be attached before the stone wash process, please test under bulk conditions before production for variation approval.

- *Prior dyeing and washing tests are necessary to avoid any problems.
- *Apply regular checks during bulk production.

Attachment on Leather Products -

Leather goes through strong chemical treatments in its tanning process, and residues of such chemicals tend to discolor metallic items. Please consult your nearest YKK sales office for leather application.

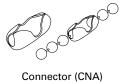
Metal Ball Chain

YKK's ball chains are made of stainless steel material.

Because of their functional and fashionable characteristics, ball chains are used in a variety of fields.

Stainless (St.) BALL CHAIN					
Ball Size	Material		Ball Size	Material	
2.3	St.	************	4.0	St.	-0-0-0-0-0-0-0-0-0-0-0-
3.2	St.	*****	4.5	St.	-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0

Attachment ·







Coupling C (CPC)

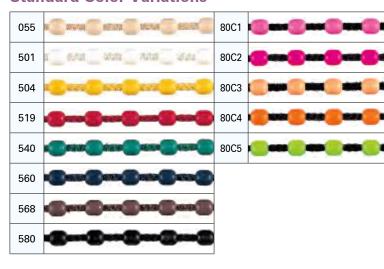
) Coupling B (CPB)

- *Depending on the size, the attachments can be shared.
- *Please use items that have appropriate properties for your desired uses.

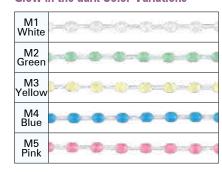
Plastic Ball Chain

Plastic balls are attached to a nylon or polyester string, which is flexible, bends freely, and soft to the touch. Available colors are standard and bright fluorescent. A two-tone color ball is also available with string and balls of different colors.

Standard Color Variations



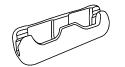
Glow in the dark Color-Variations



Attachment



Connector (CNA)



Reinforced Connector (CNA2)

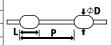
Material ·



Coupling (CP)

Size Variations

			Unit: mm
	D (outer · diameter)	L (length)	P (pitch)
35BR	3.5	4.5	8.8
48BR	4.8	6.2	12.0
58BR	5.8	7.0	13.5



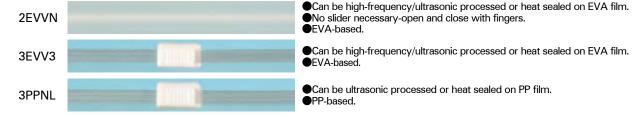
	Cord Material	Plastic Ball
35BR	Polyester	
48BR	Polyester	Polyacetal
58BR	Nylon	

JOYLON® (Rail Seal Fastener)

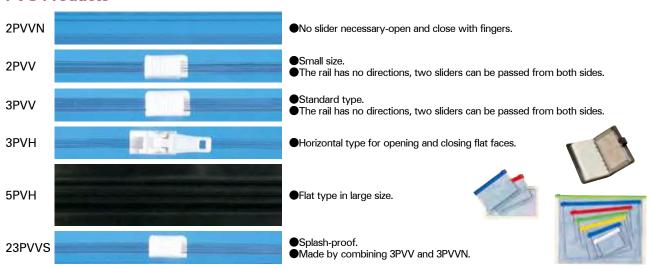
We offer various JOYLON® items for usage ranging from stationery and fancy goods, to industrial materials. **JOYLON® Products**: Six types of PVC products/Four types of Olefin products

Seven standard colors/Transparent colors and DTM are also available.

Olefin Products

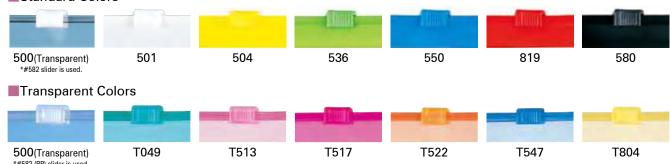


PVC Products



Color Variations

Standard Colors



Care Instructions =

Care Instructions for JOYLON® Applications

- Avoid use on garments. JOYLON® is easily affected by twisting and folding which occur during washing and dry cleaning processes. It also has a weak tolerance toward chemicals.
- Avoid use for water-proof purposes. JOYLON® does not have water repellent functions
- •We do not guarantee the compatibility of JOYLON® with final products. Be sure to select the product compatible with your purpose of use and conduct tests for required quality. If you have any inquiries, please do not hesitate to contact us.

Care Instructions for JOYLON® Attachment

- Avoid use on curved application.
- Avoid use on excessively long part or where certain strength is required. It may interfere with closing of the seal.
- Conduct the adhesion test of the film in advance.

Care Instructions for JOYLON® Usage

- •Avoid use in extremely cold (especially those made of PVC) and hot conditions.
- •Keep closed after attaching. If kept open, the rail part may turn wavy
- Avoid storing under direct sunlight for a long period of time to avoid the change of colors
- Regardless of the production stage (i.e. chain roll, after processing), the product may get affected by factors such as temperature, humidity, and sunlight as shown

below:

- PVC products: bleeding of plasticizer
- Olefin products: Occurrence of lubricant powder
- •There is a possibility of slight expansion and contraction by the change of temperature.

Care Instructions for PVC (vinyl chloride) Usage

- •If stored in a cold condition, keep it at normal temperatures before use. If the product is used soon after, it may result in damage.
- •There is a possibility that the temperature inside the product is still cold even after keeping it at normal temperatures. Make sure to let it stay for enough time.
- PVC products have a tendency of stiffening under cold temperatures. Even a light impact may cause them to break.

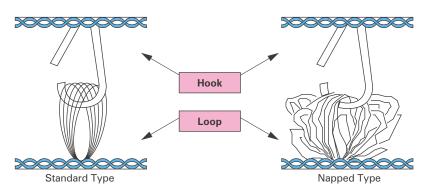
Care Instructions for 2EVVN/2EVTN/2PVVN Usage

- •2EVVN, 2EVTN, and 2PVVN are easy to open from the outer side but hard to open from the inner side.
- ●The "Round edge" is to help you check the correct direction of the chain. When attaching to the bag, make sure the "Round edge" is pointed to the outer side of the bag.



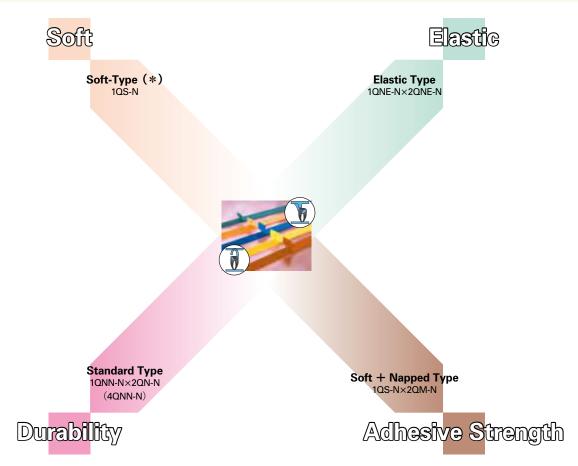
Principle of Cosmolon®

Engagement of Hook and Loop





Cosmolon® (Hook and Loop Fastener)



**Please consult with YKK sales representatives about the loop used with 1QS-N.

Hook ·

Standard Hooked Type



Excellent in durability

●Injection or Extruded Type



Injection molded in various shapes to suite use

Loop

Standard Type



Excellent in durability

Napped Type



Excellent in engaging strength

Cosmolon®

Cosmolon® Types and Uses •

			Kind		Material	Features	Main Uses	
=			STANDARD ty 1QNN-N	/pe	Nylon	■Fish hook-shaped pile for reliable engagement. ■Uses a thick monofilament hook. ■Normal type	Apparel Bags, pouches, shoes, gloves, belts, tool cases,and sporting, leisure and amusement	
	Hook	Woven	POWERHOOK® Button 1QI * * - * Polyeste		Nylon	■Fish hook-shaped pile for reliable engagement. ■High-density pile with thin monofilament hook, softer to the touch, yet strong.	goods. Handicrafts, interior decoration items Trims and seats of automobiles, trains, and airplanes (fire-resistant type)	
Cosr	ok Tape				Polyester	■Compared to nylon tapes, superior both in water resistance and UV-resistance.	Medical appliances such as corsets and tonometers	
(A) Loop Tape)е (А)	Injection			Nylon Polyester	 Injection molded type hook in various shapes. The injection molded hook provides stronger shear and peel strength than woven hooks. 	Onterior decoration items such as curtains Automobile-related items	
		Continuous Injection			PE	■Continuous injection molded type hook. ■Continuous injection molded type hook provides stronger shear and peel strength than woven hooks.	Daily necessities such as cleaning tools Belts Industrial materials	
	Loo	oven	STANDARD	2QN-N	Nylon	■Mates with all hook tapes. ■Consists of bundled loop pile. ■Provides higher shear strength.	Apparel Bags, pouches, shoes, gloves, belts, tool cases, and sporting, leisure and amusement goods.	
	р Таре		type	2QN-P	Polyester	■Compared to nylon tapes, superior both in water resistance and UV-resistance.	Handicrafts, interior decoration items Trims and seats of automobiles, trains, and	
	(B)		NAPPED type 2QM-N		Nylon	■ Mates with all hook tapes. ■ Consists of napped loop pile. ■ Stronger peel strength than standard type loop.	airplanes (fire-resistant type) Medical appliances such as corsets and tonometers	
	Mixed (AB)	MIXED type 4QNN-N Nylon		Nylon	 Hook and loop are mixed on the same tape. No distinction between the hook tape and the loop tape. 	●Apparel (ski wear, etc.) ●Gloves, belts ●Beddings, interior decoration items		

Special Varieties of Cosmolon®

WE Type	Cosmolon® fasteners used in high-frequency welding onto soft PVC sheet.
WE-T Type Cosmolon® fasteners used in high-frequency welding onto fabrics, textiles, etc. for a temporary by	
AD Type	Cosmolon® fasteners with a double-sided adhesive tape on its reverse side for a temporary bond.
ADN Type	Cosmolon® fasteners with an acrylic-based adhesive on its reverse side for a temporary bond. **1
ADS Type	Cosmolon® fasteners with a rubber-based adhesive optimized for low energy surface. General purpose. **2
HMPP Type	Cosmolon® fasteners with a stronger rubber-based adhesive optimized for low energy surface, such as PP and PE.

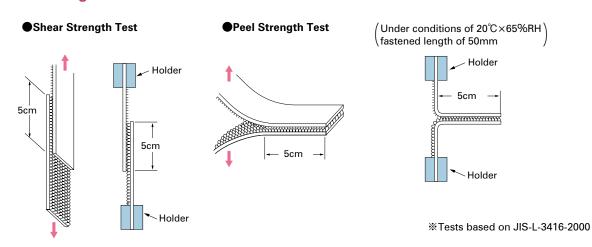
*1. ADN type is applicable to soft PVC, however the ADN can react with plasticizers, affecting bond strength.
*2. ADS type and HMPP is easily affected by plasticizers within soft PVC. Please refrain from using ADS type and HMPP on soft PVC substrates.

FP type	Fire retardant hook & loop fastener which satisfies the U.S. Federal Automobile Safety Standards FMVSS-302.
FA type	Fire retardant hook & loop fastener which satisfies the U.S. Federal Aviation Specifications, FAA-23-853 (b)

■Cosmolon[®] Sizes and Shapes

Widths: 16, 20, 25, 50 and 100mm Put-up: 25m and 50m on spool

Cosmolon® Strength Test •





Information concerning safe operation



Carefully read the following information so you can make the best and safest use of our fastening products.

YKK goes to great lengths to maintain the quality and safety of our products while making sure they are comfortable for our customers to use.

Our sales staff is prepared to assist you in all stages of your product development projects, from planning to setting up specifications. Feel free to consult with them at any time.

Caution

- 1. Our plastic hardware is developed for luggage, bags, and apparel. If you use our product for any specialized use, and especially for one of the applications listed below, please contact your YKK sales representative.
 - ① Personal flotation devices (PFD), baby carriers (baby sling), or any other applications which are subject to particular standards;
 - ② stretchers, safety belts, or any applications which are for weight-bearing;
 - 3 child seats, wheelchairs, or any applications for use to reduce movement;
 - 4 hard hats or any applications which provide safety features.
 - (5) If you intend to sell our plastic hardware to retailers or directly to consumers, please contact us in advance.

The above list is provided by way of example and is not intended to be exhaustive. We cannot guarantee that a product is suitable for a particular application, and as such, you should always conduct your own tests.

- Once our products are attached to other items, there may be approved ways to pack, store, or ship them in order to ensure their continued high quality. For example, buckles should be correctly fastened in order to avoid deformation, breakage or detachment.
- 3. Please contact your sales representative about the certification of Oeko-Tex standard 100 or others.



When using our products, you should

- 1. Choose the right fastener for your application from our product line. Your YKK sales representative can help you understand the variety of our products, their sizes, strengths, and specifications.
- 2. Select plastic hardware that is the appropriate size for the tape in your application.
- 3. Refrain from using plastic hardware that has been exposed to or is covered in dirt of any sort. Product damage or malfunction may arise if the plastic hardware is not clean.
- 4. Refrain from using plastic and metal parts in one unit because of the potential for product abrasion.
- 5. Refrain from using goods left outdoors for a long time. Exposure to the sun and other elements may cause product discoloration and/or quality deterioration.
- 6. Avoid using items that have been in contact with or near a heat source. Heat may cause product deformation and/or quality deterioration.
- 7. Refrain from using goods that have been in direct or indirect contact with chemicals. Check for residual chemicals on all parts of plastic hardware whether applied by YKK or coming from another source.
- 8. Refrain from using a product in a position that is subject to pressure, impact, or abrasion, or other condition where product deformation and/or damage may result.
- 9. Only make your choice of YKK product after adequate checks have been made. The strength of YKK products depend on the materials used, its texture, the thickness of its webbing, the position of its weld line, and other factors which you will need to take into account. For further information, please contact your YKK sales representative.
- 10. Due to certain material combination, noise from friction may be possible. If silent operation is necessary, please contact your YKK sales representative for detail.

Recommendations for using YKK Buckles

- 1. When fastening a buckle, insert the plug straight into the intended socket until you hear a clicking sound indicating the two parts are interlocking. Next, lightly pull on both parts to confirm that they have been completely fastened. Incomplete fastening may result in product deformation and damage to any article attached to the buckle, especially if the plug comes loose from the socket. If the two parts cannot be fastened together, check again for any foreign material. Do not try to
 - Click!

Right Position



- force the plug into the socket.

 2. Buckles should not be used in positions where they will be put under external pressure.
- 3. All plastic materials deteriorates over time. Buckles that have been used for a long time should be checked for damages, cracks, deformations, and abrasions before each use. If any abnormalities are found, stop using them immediately. Use in such circumstances may cause further product damage and/or malfunctions.
- 4. Completely remove any foreign materials including dust, sand, or mud from buckles before use.
- Situations which involve the application of excessive pressure or impact to a plastic fastener, such as being stepped on, struck, or thrown, will result in lower performance.
- 6. We will not be held responsible for damage to the buckles or unauthorized modification of buckles.

Material Properties

- 1. All of our products are limited by the properties and qualities of the materials used.
- 2. Some products have a weld mark (the line that forms when materials bond within its mold during production). The mark is not a defect, damage or crack. Please check the product carefully before using.

Plastic Hardware

















LB-TS

LB-LWD

LM-MV

LB-WG

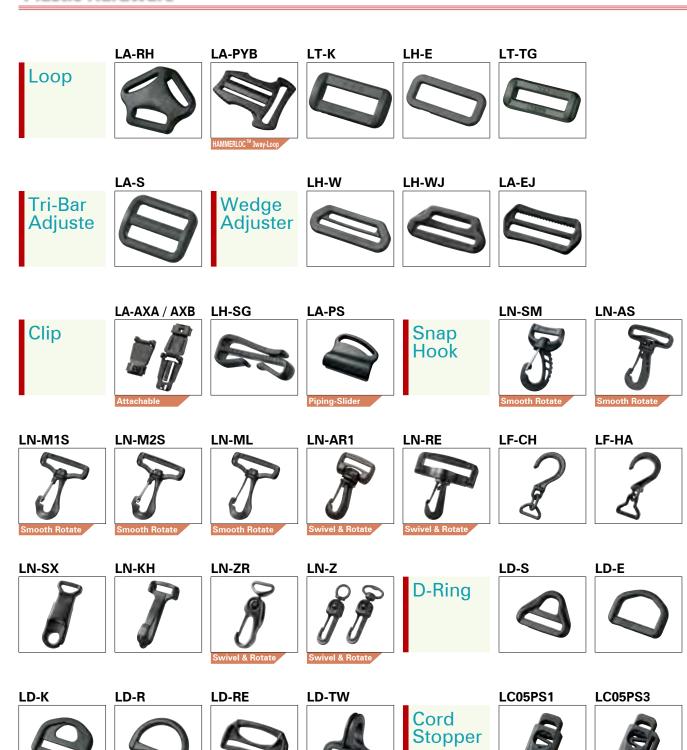
LB-PTD





These fastening products are intended for the apparel and luggage industries, but technical assistance and support are available for users interested in other applications.

Plastic Hardware







These fastening products are intended for the apparel and luggage industries, but technical assistance and support are available for users interested in other applications.

Plastic Hardware











Zipper Pull





Belt Adjuster











Cord Insert Puller





Tape End









Plastic Hardware We're on mission to protect our brand and your brand.



Country	Branch	Company	TEL	FAX
1. North, Centr	al America			
USA	Chicago (GMG)	YKK (U.S.A.) INC.	1-847-657-9295	847-657-9356
USA	Dallas (Central Region)	YKK (U.S.A.) INC.	1-972-943-7770	1-972-943-5938
USA	Detroit (TFM)	YKK (U.S.A.) INC.	1-248-468-3500	1-248-468-3503
USA	HQ, Atlanta Branch covering East Region, FTC	YKK (U.S.A.) INC.	1-770-427-5521	1-770-421-3624
USA	New York (GMG)	YKK (U.S.A.) INC.	1-212-768-9776	1-212-768-9775
USA	Lyndhurst (Northeast Region)	YKK (U.S.A.) INC.	1-201-935-4200	1-201-964-0123
USA	San Francisco (GMG)	YKK (U.S.A.) INC.	1-650-581-5254	1-650-343-3317
USA	Seattle (Northwest Washington and Oregon and GMG)	YKK (U.S.A.) INC.	1-425-277-2503	1-425-277-2579
CANADA	Toronto	YKK CANADA INC.	1-905-738-7941	1-905-738-7948
CANADA	Winnipeg	YKK CANADA INC.	1-204-633-9179	1-204-633-6179
MEXICO	Mexico City	YKK MEXICANA, S.A. DE C.V.	52-55-5803-0690	52-55-5803-069
MEXICO	Torreon	YKK MEXICANA, S.A. DE C.V.	52-871-707-0707	52-871-707-07
GUATEMALA	Guatemala	YKK EL SALVADOR S.A. DE C.V. SUCURSAL EXTRANJERA, GUATEMALA	502-6644-0644	502-6644-0645
HONDURAS	San Pedro Sula (Headquarters)	YKK HONDURAS, S.A.	504-2553-3164	504-2553-1728
NICARAGUA	Nicaragua	YKK EL SALVADOR S.A. DE C.V. SUCURSAL EXTRANJERA, NICARAGUA	505-8986-1700	505-8986-1711
COLOMBIA	Medellin (Headquarters)	YKK COLOMBIA S.A.S.	574-322-9394	574-360-0070
2. South Amer	ica			
BRAZIL	Sao Paulo	YKK DO BRASIL LTDA	55-11-3066-1111	55-3058-4755
ARGENTINA	Buenos Aires	YKK ARGENTINA S.A.	54-11-4554-3333	54-11-4553-50
3. EMEA (Euro	pe, Middle East, Africa)			
UNITED KINGDOM	London	YKK EUROPE LTD.	44-20-7448-1358	-
	Moscow	000 YKK	7-495-325-3025	7-495-231-281
NORWAY	Oslo	YKK (U.K.) LTD. YKK NORGE FILIAL AV	47-6685-5850	47-6685-5860
SWEDEN	Boras	YKK (U.K.) LTD. FILIAL SVERIGE	46-33-418-180	46-33-416-550
FINLAND	Vantaa	YKK (U.K.) LTD. SIVULIIKE SUOMESSA	358-9-759-7860	358-9-759-786
DENMARK	lkast	YKK DANMARK A/S	45-97-155-388	45-97-155-449
LITHUANIA	Vilnius	YKK POLAND SP. Z O.O.	370-5-2133-227	370-5-2336132
BELARUS	Belarus Representative office	000 YKK	375-17-350-55-57	375-17-350-55
IRELAND	Dublin	YKK (U.K.) LTD.	353-1-403-5959	353-1-466-007
GERMANY	Mainhausen	YKK DEUTSCHLAND GMBH	49-6182-805-1570	49-6182-805-1
POLAND	Rzgow shop	YKK POLAND SP.Z O.O.	48-42221-2068	-
KAZACHSTAN	Almaty	YKK TURKEY, KAZAKHSTAN REP.OFFICE	7-727-225-05-44	7727-225-05-8
UKRAINE	Kiev	YKK POLAND SP. Z O.O.	380-44-461-98-67	380-44-461-98
BELGIUM	Belgium	YKK FRANCE SARL	32-9385-57-51	32-9-385-65-2
FRANCE	Paris	YKK FRANCE SARL	33-140-89-6200	33-140-89-622
CZECH REPUBLIC		YKK CZECH SPOL S.R.O	420-5-31-01-54-00	420-5-31-01-5
			42 2626 624 DE	
	Marz	YKK EUROPE LTD.	43-2626-624-05 43-2626-624-55	43-2626-624-5
AUSTRIA ROMANIA	Marz Bucharest	YKK EUROPE LTD. YKK ROMANIA SRL	43-2626-624-55 40-214-087-160	43-2626-624-5
AUSTRIA				40-214-087-19

YKK ESPANA SA

34-93-447-9700

34-93-447-9731

SPAIN

Barcelona

Country	Branch	Company	TEL	FAX
PORTUGAL	Porto	YKK PORTUGAL-ACESSORIOSPARA VESTUARIO LTA.	351-22-961-9820	351-22-960-002
GREECE	Thessaloniki	YKK HELLAS A.E.B.E.	30-2310-327830 30-2310-328270	30-2310-317388
TURKEY	Istanbul	YKK METAL VE PLASTIK URUNLERI SANAYI VE TICARET A.S.	90-212-314-7900	90-212-314-804
LEBANON	Beirut	YKK MIDDLE EAST SAL	961-1586-687	961-1-586354
JORDAN	Amman	YKK MIDDLE EAST SAL, JORDAN OFFICE	962-6582-7929	962-6-5827930
UNITED ARAB EMIRATES	Dubai	YKK MIDDLE EAST SAL, DUBAI REPRESENTATIVE OFFICE	971-4-3362-840	971-4-3362-841
MOROCCO		YKK MAROC S.A.R.L	212-5-22-34-29-15	212-5-22-35-25
EGYPT	Alexandria Home office	YKK EGYPT S.A.E. PRIVATE FREE ZONE	20-127-3446-222	-
KENYA	Mombasa	YKK KENYA EPZ LIMITED	254-20-2054188	254-20-205115
MAURITIUS	Mauritius	YKK SOUTHERN AFRICA (PTY) LTD.	230-467-4431	230-466-9508
SOUTH AFRICA	Johannesburg	YKK SOUTHERN AFRICA (PTY) LTD.	27-11-781-4240	27-11-781-4250
4. China				
CHINA	Shanghai (Office)	SHANGHAI YKK ZIPPER CO.,LTD.	86-21-2509-9988	86-21-5405-083
CHINA	Beijing	DALIAN YKK ZIPPER CO.,LTD.	86-10-5979-8626	86-10-8586047
CHINA	Dalian Branch	DALIAN YKK ZIPPER CO.,LTD.	86-411-8250-9088	86-411-8250-90
CHINA	Qingdao	DALIAN YKK ZIPPER CO.,LTD.	86-532-8163-7090	86-532-8501-65
CHINA	Guangzhou	YKK ZIPPER (SHENZHEN) CO., LTD.	86-20-3847-7968	86-20-3839-983
CHINA	Shenzhen (Futian Office)	YKK ZIPPER (SHENZHEN) CO., LTD.	86-755-8287-2288	86-755-8287-22
CHINA	Xiamen	YKK ZIPPER (SHENZHEN) CO., LTD.	86-592-268-6200	86-592-268-620
CHINA	Shang Hai (Hong Qiao)	YKK FASTENING PRODUCTS SALES (SHANGHAI) CO., LTD.	86-21-6236-9292	86-21-6236-852
HONG KONG	Kowloon	YKK HONG KONG LTD.	852-2378-8300	852-2375-6088
5. Asia	Carri	WWW MODELA COLLED	82-2-3705-7900	82-2-3705-7991
KOREA (SOUTH)	Seoul	YKK KOREA CO.,LTD.	92-42-3579-	
PAKISTAN	Lahore Sales Office	YKK PAKISTAN (PVT) LIMITED	2020/2021/2022	92-42-3578-167
INDIA	Gurgaon	YKK INDIA PVT.LTD.	91-12-4392-4800	91-12-4392-489
NEPAL	Kathmandu Liaison Office	YKK INDIA PVT.LTD.	98-01-110145 98-01-5111146	-
MYANMAR	Yangon	YKK (THAILAND) CO., LTD.	95-9-263671850	-
BANGLADESH	Dhaka (office)	YKK BANGLADESH PTE LTD.	880-2-9842227 880-2-58814502	880-2-9843716
TAIWAN	Taipei	YKK TAIWAN CO.,LTD.	886-2-2511-5157 886-2-2511-5156 (AP Division)	886-2-2563-557
VIETNAM	Ho Chi Minh	YKK VIETNAM CO., LTD.	84-28-382-33793	84-28-382-3379
THAILAND	Bangkok	YKK (THAILAND) CO., LTD.	66-2-718-0590	66-2-718-0591
CAMBODIA	Phnom Penh	(YKK VIETNAM CO., LTD. PHNOM PENH REPRESENTATIVE OFFICE)	855-23-723-637	855-23-430-68
PHILIPPINES	Manila	YKK PHILIPPINES, INC.	63-2-781-1658	63-2-807-8660
SRI LANKA	Colombo	YKK LANKA (PRIVATE) LTD.	94-11-5579200	94-11-2574614
MALAYSIA	Johor Bahru	YKK (MALAYSIA) SDN BHD	60-7-237-4389	60-7-237-4890
INDONESIA	Jakarta	PT. YKK ZIPPER INDONESIA	62-21-3193 1708	62-21-310-675
INDONESIA	Jakarta	PT. YKK ZIPCO INDONESIA	62-21-3193-1708	62-21-310-675
AUSTRALIA	Sydney Sales Office & Plant	YKK OCEANIA LTD AUSTRALIA BRANCH	61-2-9577-1955	61-2-9577-199
FIJI	Suva	YKK OCEANIA LTD FIJI BRANCH	679-3385-699	679-3384-909
NEW ZEALAND	Wellington Home Office	YKK OCEANIA LTD.	64-04-383-4058 / 64-21-439-017	64-09-269-0287
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