

# ケーブルベア配線の注意事項

## ケーブルの選定

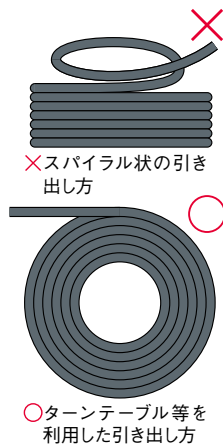
- VCT 531BX・VCT 531BXS・VCT 531Z・VCT 531ZSB・KVC-43BX・KVC-43BXS・CE-531NZ・CE-531NZSB・KRC-453Z・VCTF 43Z・VCTF 43ZSB・KDF-L・KDF-SBL・CE-531Z / MTW・KST-UL21795・KST-SB-UL21795
- KDF・KDF-SB（混配線、ケーブルベアのスピードが早い場合にお勧めします。）

## ケーブルベアの選定

- 1 ケーブルベア曲げ半径**  
ケーブル仕上外径の7.5倍以上をケーブルベアの曲げ半径として下さい。
- 2 ケーブルベア横幅**  
ケーブルベア内にケーブルを水平に並べ、十分余裕があるような横幅のケーブルベアを選定して下さい。
- 3 ケーブルベア内仕切り板**  
できるだけ多くの仕切り板を設け、ケーブル同士またはエアホース等と区別して配線して下さい。（ケーブル毎に仕切り板を入れ、エアホースは仕切り板で完全に分ける方法が理想的です。）
- 4 ケーブルベア内の占積率**  
ケーブルベア内のケーブル占積率が30%以下となるようなケーブルベアを選定して下さい。

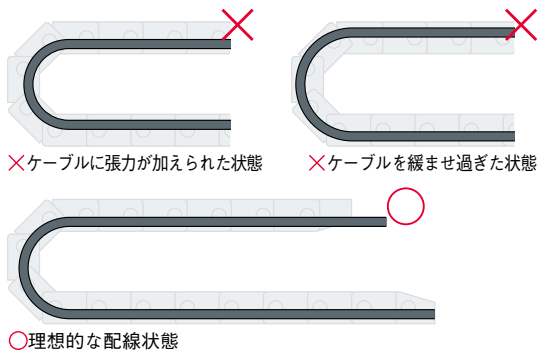
## 配線上の注意事項

- 1 ケーブルの捻れ**
  - ケーブル切断時  
束からスパイラル状に引き出すと、ケーブルに捻れが入りますので、行わないで下さい。
  - ケーブル配線時  
ケーブルのくせをとるよう一直線状に伸ばした後、出来るだけケーブルに捻れが入らないように配線を行って下さい。（ケーブル表面の印刷表示を目安として下さい。）



- 2 ケーブルには張力を加えない**  
ケーブルに張力を加えてケーブルベアに敷設すると、ケーブルベア内で、ケーブルがつっぱった状態となり、ケーブルベアの内壁で、シースが削られます。ケーブルに張力が加わらないような配線をして下さい。

- 3 ケーブルを緩ませ過ぎない**  
ケーブルベアに対してケーブルを緩ませすぎた場合、ケーブルベアの内壁でシースが削れたり、他のケーブル等と絡みやすくなりますので、曲げ部分でケーブルベアの高さ方向の中心を通るように長さを調節して配線して下さい。



- 4 ケーブルベア内で固定しない**  
ケーブルをケーブルベアの可動部分で固定すると、ケーブルが持つ曲げ応力の分散・吸収作用が失われます。ケーブルはケーブルベアの可動しない両端末で固定して下さい。

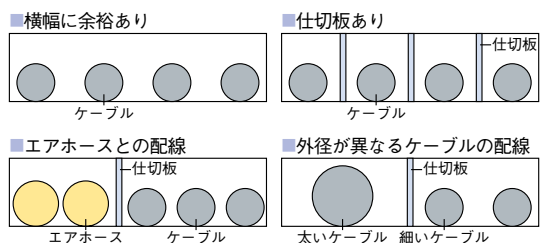
- 5 エアホース等との配線**  
エアホース等の硬いものとケーブルと一緒に配線すると、エアホース等によりケーブルが潰される（若しくは押しえつけられる）ことで、ケーブル寿命が低下します。必ず仕切り板を設けて、ケーブルとエアホース等を区別して配線して下さい。

- 6 混配線しない**  
混配線をすると、ケーブル同士が干渉し合うことで、各ケーブルが持っている特性を十分に発揮できません。仕切り板を設けて、ケーブル同士が干渉しないような配線として下さい。

- 7 外径が大きく異なるケーブル同士を配線しない**  
外径が大きく異なるケーブル同士を配線すると、細いケーブルが太いケーブルに押しえつけられ、細いケーブルが断線しやすくなります。仕切り板にて分離させる方法をお奨めします。

- 8 フラットな配線**  
ケーブルベア内で段積みして配線すると、他ケーブルと頻繁に干渉し合うことになり、フラットな配線を行なって下さい。

## 配線事例（下図のような配線をお勧めします。）



# Instructions for Cable Wiring into Cable Carrier

## Cable Selection

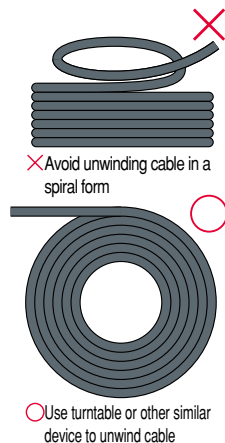
- VCT 531BX • VCT 531BXS • VCT 531Z • VCT 531ZSB • KVC-43BX • KVC-43BXS • CE-531NZ • CE-531NZSB • KRC-453Z • VCTF 43Z • VCTF 43ZSB • KDF-L • KDF-SBL • CE-531Z / MTW • KST-UL21795 • KST-SB-UL21795
- KDF • KDF-SB (recommended for multiple cable connection to cable carrier or cable connection to high speed cable carrier)

## Cable Carrier Selection

- 1 Cable carrier's permissible bending radius**  
The permissible bending radius of cable carrier should be based on 7.5times the outside diameter of cable wired into the cable carrier or more.
- 2 Cable carrier's width**  
The width of cable carrier should be such that when cables are horizontally arranged in the cable carrier, sufficient space is provided between the cables.
- 3 Cable carrier's inner partition**  
Cable carrier should be provided with as many inner partitions as possible to allow cables and/or hoses wired into the cable carrier to be separated from one another (ideally with a partition put between any two of the cables and a partition between the cable and hose groups).
- 4 Cable carrier's cable space factor**  
Cable carrier should be selected so that the cable carrier's cable space factor is 30% or less.

## Precautions to be taken in cable connection to cable carrier

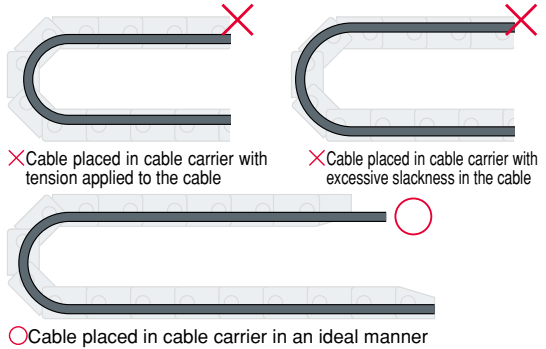
- 1 Precaution against cable twist**
  - During cable cutting  
When unwinding cable from a spool, avoid pulling it in a spiral form, which may cause it to be twisted.
  - During cable connection  
When unwinding cable from a spool, extend it in a straight line to straighten it, making sure that it is free from twists before wiring it properly (using the printed marking on it as a guide for its proper connection).



- 2 Precaution against cable tension**  
When placing cable in cable carrier, take precautions against tension to the cable, which may it to be stretched in the cable carrier, resulting in the cable's sheath being shaved by the cable carrier's inner wall.

## 3 Precaution against excessive cable slackness

When placing cable in cable carrier, take precautions against excessive slackness of the cable in the cable carrier, which may cause the cable to have its sheath shaved by the cable carrier's inner wall or become entangled with other cable placed together in the cable carrier. To prevent such trouble, place the cable in the cable carrier by adjusting the length of the cable in the bent portion of the cable carrier so that it passes through the cable carrier's center in its height direction.



## 4 Precaution against cable fixation

When placing cable in cable carrier, take precautions against fixation of the cable in the cable carrier's movable portion, which may cause the cable's action of dispersing/absorbing its bending stress to be lost. Place cable in cable carrier, fixing the cable at both ends of the cable carrier, at which it is immobile.

## 5 Precaution against cable contact with air hose or other hard hose

When placing cable in cable carrier together with air hose or other hard hose, take precautions against contact of the cable with the hose, which may cause the cable to be crushed (or pressed) by the hose, resulting in shortened service life of the cable. To prevent such trouble, place cable in cable carrier together with air hose or other hard hose with a partition put between the cable and hose to separate them from each other.

## 6 Precaution against interference between cables

When placing a plurality of cables in cable carrier, take precautions against interference between the cables, which may cause them to fail to display their respective individual characteristics. To prevent such trouble, place a plurality of cables in cable carrier with a partition put between any two of the cables to prevent interference between them.

## 7 Precaution against contact between cables significantly different in outside diameter

When placing thin and thick cables (significantly different in outside diameter) together in cable carrier, take precautions against contact between the cables, which may cause the thin cable to be pressed by the thick cable, resulting in breakage of the former. To prevent such trouble, place thin and thick cables together in cable carrier with a partition put between the thin and thick cables.

## 8 Precaution against cable stacking

When placing a plurality of cables in cable carrier, take precautions against stacking of the cables, which may result in frequent interference between the cables, having adverse effects on their performance.

## Examples of Cable Wiring into Cable Carrier (Recommended)

