ISO Channel Codes in FalCon MovXact

Default	Index	Content	Code
0	1	Test Object	0 = undefined / other
0	2	Position	0 = out of position / undefined
ABCD	3-6	Main Location	*
000000	7-12	3 x Fine Location	3 x Fine Location
DS	13-14	Physical Dimension	**
X (Y,Z)	15	Direction	***
V	16	Filter Class	V = Video

* Main Location = automatically set if the parameter is not preset:
2??? = "2" (= Laboratory ID-Code) + marker name, if name <= 3 characters
or
M??? = "M" (= marker) + marker index (max. 3 digits)

** Physical Dimension =
AA Angle Acceleration
AC Acceleration
AN Angle
AV Angle Velocity
DC Distance
DS Displacement
VE Velocity

*** Direction = X,Y,Z according to the selected space calibration/coordinate system

Implementation

- To each marker an additional ISO base code with 12 characters is assigned; this alias name is hold as parameter in the *Marker Basic Settings*, e.g. marker name = *Head-Eye*, ISO code = *S1HEAD0000H3*.
- Enter the marker names and ISO codes best using the marker defaults (MRD or APT files).
- MovXact checks only the code's number of characters but not the ISO compatibility.
- MovXact does not check the selected coordinate system with respect to ISO compatibility.
- While writing ISO channels the channel names will be extended automatically by Physical Dimension", „Direction" and „Filter Class" = „V".
- The filter class has to be set with the fixed tag "V", therefore a possible filtering can be indicated only as a comment.
- Interactive display of markers in analysis image:
  Press the Shift-key and move the mouse over the analysis image, then the ISO code of that marker will be shown, whose trajectory value has the shortest distance to the cursor position in the current image.
  Press Shift key + „A": all ISO base codes in the image are shown.
  Please note that the analysis image needs to be activated (title bar = blue) for this function!

- **Export/Import of Measurement Results**

  1. ISO MME/CHN file

  2. FalCon eXtra ASCII:

```
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
:-> 2D-Marker-Coordinates [m] [s]
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
@Marker:             Fix_1
ISO-Code:            00ABCD000000DSXV,00ABCD000000DSZV
Abscissa,Ordinate:   x,z
...
```

  or

```
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
:-> 3D-Marker-Coordinates [m] [s]
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
@Marker:             Fix_1
ISO-Code:            00ABCD000000DSXV,00ABCD000000DSYV,00ABCD000000DSZV
...
```

  If the ISO basis code was never set in the program, the label "----" (= 4 characters) is written.

- **Export/Import of Marker Defaults**

  FalCon eXtra ASCII *.txt or *.apt:

```
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
:-> Markers
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
@Marker:           C_39
ISO-Code (12):     00ABCD000000
Type               CODE
...
```

  The postfix "(12)" indicates that not the complete ISO code with 16 characters is written, but only the basis code (= first 12 characters) .

```
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
:-> Marker-Names
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
C_39           00M001000000      CODE #39
C_14           00M002000000      CODE #14
C_17           ----              CODE
Fix_1          00HEAD000000      DOT
...
```

  The specification of the marker type (and its code number) is optional.
  If the file contains additionally control point data, their marker type will be applied.

  If the ISO basis code was never set in the program, the label "----" (= 4 characters) is written or interpreted as default.