

Specifying characteristic values

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Units of measurement

The table below shows the units of measurement that can be used in FOSI characteristic and attribute values. Decimals are allowed. The zero before a decimal point is optional.

Table 1 FOSI units of measurement

Unit	Abbreviation	Examples
centimeters	cm	5cm, 0.65cm, .2cm
inches	in	11in, 8.5in, 0.5in, .25in
millimeters	mm	6mm, 10.1mm, 0.5mm, .1em
points	pt	4pt, 0.5pt, .75pt
picas	pi	20pi, 1.25pi
relative units	em†	2em, 0.5em‡, .33em

†The em is a relative unit of measurement equal to the current font size. When the font size changes, the size of the em changes.

‡0.5em represents an en space

Except for relative units, you can mix units of measurement, with or without a plus sign: `1in+2pi` is the same as `1in2pi`.

Subtraction is allowed. For example: `-1pi-4pt` calculates to `-16pt`, `-1pt+4pt` calculates to `+8pt`, and `1in-2pi` calculates to `48.27pt`.

The default unit of measurement is point (pt).

TYPE TIP

1 pica=12 points.

In Arbortext Editor, 1 inch=72.27 points

FOSI TIP

Explicitly coding `pt` rather than letting it default is helpful when you search the FOSI as an ASCII file.

FOSI TIP 

Including the pound sign (#) with RGB values facilitates searching the FOSI as an ASCII file.

Value types

The tables in **FOSI categories and characteristics** below that describe characteristics and attributes refer to the following types of values:

NOTE: FOSI values are case-insensitive.

NOTE: The types of values listed below do not strictly follow the FOSI standard. Instead, they are designed to communicate as easily as possible PTC/Arbortext's support for FOSI.

COLOR	An RGB value or a named color. An RGB value must be hexadecimal digits from 0 through F, optionally preceded by a pound sign (#). Named colors are: aqua, black, blue, brown, gray, gray1, gray2, gray3, gray4, gray5, green, lime, maroon, navy, olive, orange, red, teal, violet, white, and yellow. Note that named colors may not be output at "full strength" For example, when <code>high1t bckc1r</code> is specified as <code>b1ue</code> , the color is lighter than when <code>#0000FF</code> is specified. Also, gray and gray 3 are the same. gray1 is the same as <code>#EEEEEE</code> ; gray2 is equivalent to <code>#DDDDDD</code> ; gray3 matches <code>#CCCCCC</code> ; gray4 is identical to <code>#BBBBBB</code> ; gray 5 is equal to <code>#AAAAAA</code> .
DEGREES	A positive integer between 0 (zero) and 360. A value of 361 is the same as 1, 362 is the same as 2, etc.
ID/IDREF	An ID is used to uniquely identify a characteristic or set of characteristics so that it can be referenced by an IDREF. See IDs on page 33 for details on ID and IDREF characteristics in a FOSI.
INTEGER	A whole number that is either positive, zero, or negative. A keyboard hyphen character ("-") before the number designates a negative integer. Some characteristics do not accept negative integers.
NAME TOKEN	A string of no more than 8 characters limited to the following: upper- and lowercase letters ("A" through "Z" and "a" through "z"), Arabic numbers zero through nine ("0" through "9"); a period (.) character; and/or a dash (-).
PERCENTAGE	A positive integer, where 100 indicates 100%.
PLACEMENT	Placement may be "before" or "after." "Before" means after the start tag, but before the beginning of the element content. "After" means after the element content, but before the end tag.

POINTER	A reference to information contained in an external file. A pointer has the attribute type of "entity" and thus requires an entity declaration in the FOSI declaration subset to identify the external file.
SIZE/DISTANCE	A positive or negative number, which may include up to three decimal points, followed by a two-letter abbreviation for a unit of measurement, as shown in Table 1 FOSI units of measurement on page 24. For example "6pt" means 6 points, and "6.4pt" means 6 and 4/10ths of a point. If a unit of measurement is not included, points are assumed.
STRING	A string is a sequence of one or more characters. Character entities may be used for non-keyboard characters. The syntax for string depends on its context in a FOSI.
TOGGLE	0 (zero) or 1 (one). 0 equates to "no," "off," and "false." 1 means "yes," "on," and "true." In the tagged FOSI editor and the ASCII file, 0 and 1 are used. In the FOSI style panels interface, the choices are "no" and "yes."
URI	Uniform Resource Identifier a string of characters that identifies resources in the web: documents, images, downloadable files, services, electronic mailboxes, and other resources.

Syntax that applies only to specific categories and characteristics is described with the relevant categories, as follows:

- **Context syntax** on page 301
- **Table 56 Leftind syntax** on page 339
- **Table 57 Firstln indent syntax** on page 339
- **Table 58 Rightind syntax** on page 340
- **Table 78 Savetext conrule and usetext source syntax** on page 443

Spacing specification

A **spacing specification** is horizontal space. The amount of space can be fixed or relative.

A fixed spacing spec inserts the specified amount of space in the writing direction. A negative fixed value moves the current location on the current writing line in the opposite direction from the writing direction.

A relative spacing spec refers to a location on the current line (in the writing direction) using what Arbortext Editor refers to as a kern-to. The space in between is called “padding.” A kern-to is coded as a spacing spec preceded by an at sign (@).

The effect is similar to a “tab stop.” However, if two “tab stops” are too close together, the content may not fit. If the content of the element is too long, it continues through the next “tab stop”.

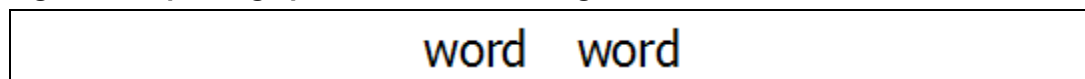
NOTE: padding works only for the first line of a block element.

Table 1 above shows valid units of measurement for spacing specifications.

Spacing specification examples

In the following figure, a fixed spacing specification separates two words.

Figure 1 Spacing specification in writing direction



FOSI fragment

```
<usetext placemnt="before" source="\word\, 2pi, \word\"></usetext>
```

When preceded by a minus sign (-), the horizontal space moves the current position in the opposite direction, as illustrated by the following example.

Figure 2 Negative spacing specification



FOSI fragment

```
<usetext source="\&block;&block;\, -16pt, <para.fmt>, \&para;\, </para.fmt>">
<subchars>
```

```

<font inherit="1" size="24pt">
</subchars>
</usetext>
...
<e-i-c gi="para.fmt">
<charlist inherit="1">
<font inherit="1" size="0.7em" weight="bold" offset="5pt">
<highlt inherit="1" fontclr="#FFFFFF">
</charlist>
</e-i-c>

```

Relative spacing specification can create “tab stops” in the Edit window. However, as the following figure shows, alignment depends on the content.

Figure 3 “Tab stops” in Edit window

<u>Partno</u>	<u>Part Description</u>	<u>Unit Price</u>
12345	A long description about a hammer	\$12.34
67890	A saw	\$56.78
ABCDE	A set of screwdrivers, with a description of each one	\$234.56

XML fragment

```

<partlist>
<part><partno>12345</partno><partdesc>A long description about
a hammer</partdesc><unit-price>12.34</unit-price></part>
<part><partno>67890</partno><partdesc>A saw</partdesc><unit-price>
56.78</unit-price></part>
<part><partno>ABCDE</partno><partdesc>A set of screwdrivers, with a
description of each one</partdesc><unit-price>234.56</unit-price></part>
</partlist>

```

FOSI fragment

```

<e-i-c gi="partlist">
<charlist inherit="1">
<usetext source="@20pi,\ Unit\">
<subchars charsubsetref="startline bold"></subchars>
</usetext>
<usetext source="\Partno\,@3pi,\Part Description\,@20pi,\Price\">
<subchars charsubsetref="startline bold underline"></subchars>
</usetext>
...
<e-i-c gi="part" context="partlist">
<charlist inherit="1" charsubsetref="startline">
...
<e-i-c gi="partno" context="part partlist">
<charlist inherit="1">

```

```

...
<e-i-c gi="partdesc" context="part partlist">
<charlist inherit="1" charsubsetref="inline">
<usetext source="@3pi"></usetext>
...
<e-i-c gi="unit-price" context="part partlist">
<charlist inherit="1" charsubsetref="endline">
<usetext source="@20pi, \$\"></usetext>
...

```

A relative spacing specification is often used to support lists with numbers or bullet characters that “hang” in the margin, as shown in the following figures.

Figure 4 Left-aligned, hanging numbers

Spacing Specifications

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Donec interdum varius rutrum nisi in dum velit.

Lorem Ipsum

1. Sras lobortis aliquet varius rutrum donec interdum vivamus ultrices hasellus vitae.
2. Stellus ac feugiat aliquam
3. Wurna nibh imperdiet purus.
4. Shasselus dapibus libero vitae pellen.
5. Qut eleifend elit velit in ero
6. Fonec in augue
7. Verat vitae massa. Proin metus elit, lobortis et venenatis sed, blandit sed, massa.
8. Testibulum nec ultrices.
9. Stortor a enim volutpat mattis
10. Adui velit gravida massa
11. Kut cursus tortor sed gravida erat orci aot.
12. Bint eger pellen tesque dapibus dui gli squam port titor, valis dignis sim per diam.

Sumip Remlo

- a. Lorem feugiat ipsum dolor sit amet, consectetur adipiscing elit.
- b. Pellentesque libero dolor, ornare non, tristique ac vol utpat vel, urna.
- c. Scon sect ametuer adipiscing elit.
- d. Bornare non, tristique ac vol utpat.
- e. Lorem dolor sit amet.
- f. Plibero dolor, ornare nonh tristique ac vol utpat velurna.
- g. Borem ipsum dolor sit amet, cony esect detuer adipiscing elit.
- h. Raptent taciti sociosqu.
- i. Worem ipsum dolor sit amet staded.
- j. Adolor ornare non stique ac vol.
- k. Hatetuer adipiscing elit.
- l. Etiam vel tortor id massa luctus.
- m. Usect letuer adipiscing elit.

Donec orci hendrerit turpis at tellus cursus pulvinar.
Pellentesque libero dolor, ornare non, tristique ac vol.

XML fragment

```

<title>Spacing Specifications</title>
<paragraph>Lorem ipsum dolor...</paragraph>
<number-list1><title>Lorem Ipsum</title>
<item1><paragraph>Scras lobortis aliquet...</paragraph></item1>
...
<item1><paragraph>Binteger pellentesque ...</paragraph>
<number-list2><title>Sumip Remlo</title>
<item2><paragraph>Lorem feugiat...</paragraph></item2>
...
<item2><paragraph>Usect letuer...</paragraph></item2>
</number-list2>
</item1>
</number-list1>

```

FOSI fragment

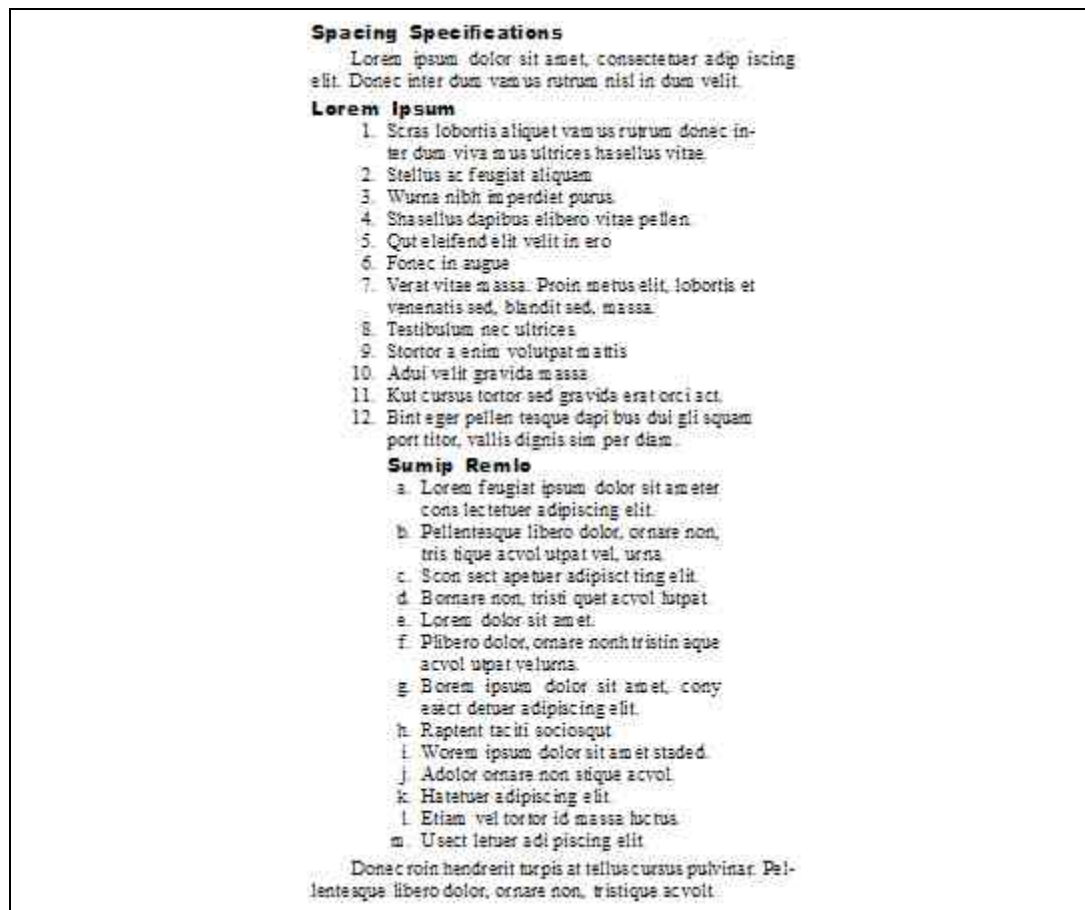
```

<counter initial="0" style="arabic" enumid="item1ct">
<counter initial="0" style="alphalc" enumid="item2ct">
...
<e-i-c gi="item1" context="number-list1">
<charlist inherit="1" charsubsetref="block">
<indent inherit="1" leftind="@+1.5em" firstln="*-1.5em">
<numerat increm="1" enumid="item1ct">
<usetext source="item1ct,\. \,@1.5em" placemnt="before"></usetext>
...
<e-i-c gi="item2" context="number-list2">
<charlist inherit="1" charsubsetref="block">
<numerat increm="1" enumid="item2ct">
<usetext source="item2ct,\. \,@1.5em" placemnt="before"></usetext>
...
<e-i-c gi="number-list1">
<charlist inherit="1" charsubsetref="block">
<indent inherit="1" leftind="@+2em" rightind="@+2em" firstln="*">
<reset resetlist="item1ct">
...
<e-i-c gi="number-list2" context="* number-list1">
<charlist inherit="1" charsubsetref="block">
<indent inherit="1" leftind="@+1.5em" rightind="@+1.5em" firstln="*-1.5em">
<reset resetlist="item2ct">
...
<e-i-c gi="paragraph" context="item1">
<charlist inherit="1" charsubsetref="endline"></charlist>
...
<e-i-c gi="paragraph" context="item2">
<charlist inherit="1" charsubsetref="endline"></charlist>
...
<e-i-c gi="title" context="number-list1">
<charlist inherit="1" charsubsetref="title"></charlist>
...
<e-i-c gi="title" context="number-list2">

```

```
<charlist inherit="1" charsubsetref="title"></charlist>
...
```

Figure 5 Right-aligned, hanging numbers



FOSI fragment

```
<counter initial="0" style="arabic" enumid="item1ct">
<counter initial="0" style="alphalc" enumid="item2ct">
...
<e-i-c gi="item1" context="number-list1">
<charlist inherit="1" charsubsetref="block">
<indent inherit="1" leftind="@+1.75em">
<enumerat increm="1" enumid="item1ct">
<usetext source="spacefill,item1ct,\.\. ,0.5em,@3.75em" placemnt="before">
...
<e-i-c gi="item2" context="number-list2">
```

```

<charlist inherit="1" charsubsetref="block">
<enumerat increm="1" enumid="item2ct">
<usetext source="spacefill,item2ct,\\.\\.0.5em,@1.75em" placemnt="before">
...
<e-i-c gi="number-list1">
<charlist inherit="1" charsubsetref="block">
<indent inherit="1" leftind="@+2em" rightind="@+2em" firstln="*-2em">
<reset resetlist="item1ct">
...
<e-i-c gi="number-list2" context="* number-list1">
<charlist inherit="1" charsubsetref="block">
<indent inherit="1" leftind="@+1.75em" rightind="@+1.75em"
firstln="*-1.75em">
<reset resetlist="item2ct">
.....
<e-i-c gi="paragraph" context="item1">
<charlist inherit="1" charsubsetref="endline">
...
<e-i-c gi="paragraph" context="item2">
<charlist inherit="1" charsubsetref="endline">
...
<e-i-c gi="title" context="number-list1">
<charlist inherit="1" charsubsetref="title">
...
<e-i-c gi="title" context="number-list2">
<charlist inherit="1" charsubsetref="title">
...

```

Figure 6 Right alignment of list numbering

