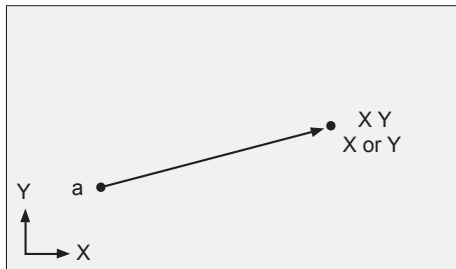


6.1.2 Programming of Geometric Elements

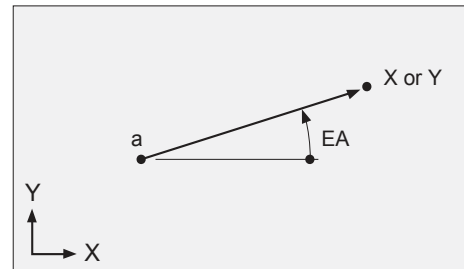
6.1.2.1 Programming of Fully Defined Geometric Elements



Fully defined linear geometric element (point «a» defined)

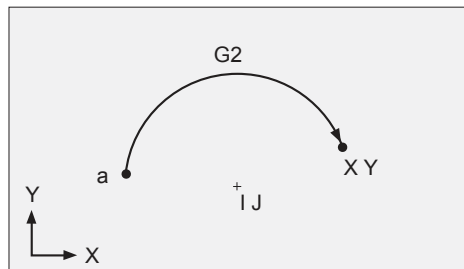


N.. G01 X..
or N.. G01 Y..
or N.. G01 X.. Y..

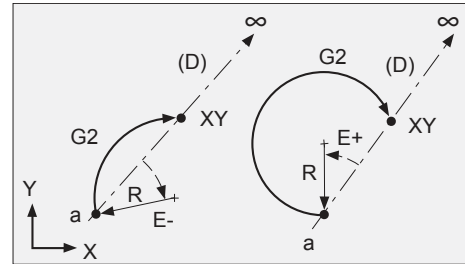


N.. G01 EA.. X..
or N.. G01 EA.. Y..

Fully defined circular geometric element (point «a» defined)



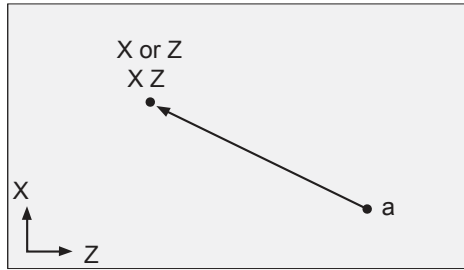
N.. G02/G03 X.. Y.. I.. J..



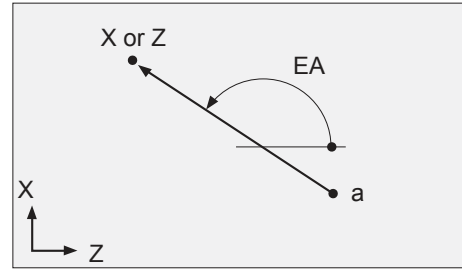
N.. G02/G03 X.. Y.. R.. E+/E-



Fully defined linear geometric element (point «a» defined)

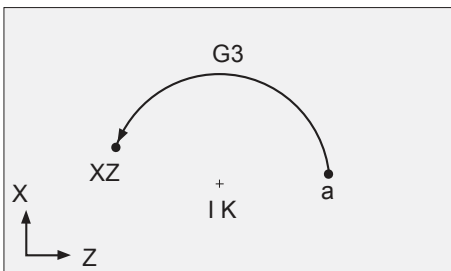


N.. G01 X..
or N.. G01 Z..
or N.. G01 X.. Z..

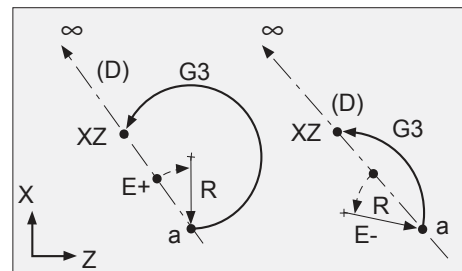


N.. G01 EA.. X..
or N.. G01 EA.. Z..

Fully defined circular geometric element (point «a» defined)



N.. G02/G03 X.. Z.. I.. K..



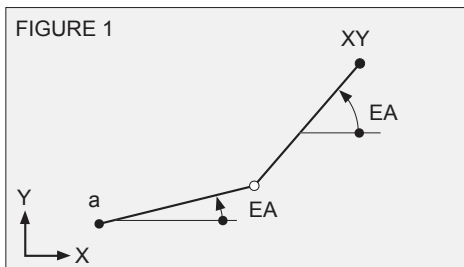
N.. G02/G03 X.. Z.. R.. E+/E-

6.1.2.2 Programming of Geometric Elements not Completely Defined

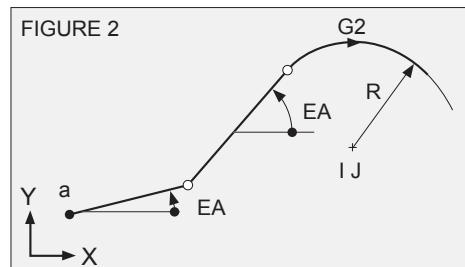


Geometric elements defined using the following block(s)

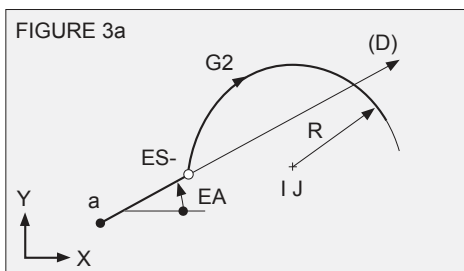
The first element is a line (start point «a» is fully defined).



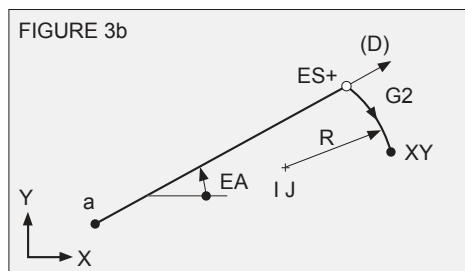
```
N.. G01 EA.. ES
N.. EA X.. Y..
```



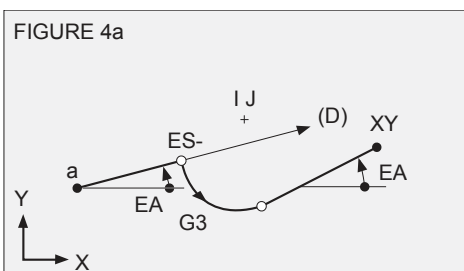
```
N.. G01 EA.. ES
N.. EA..
N.. G02/G03 I.. J.. R../X.. Y..
```



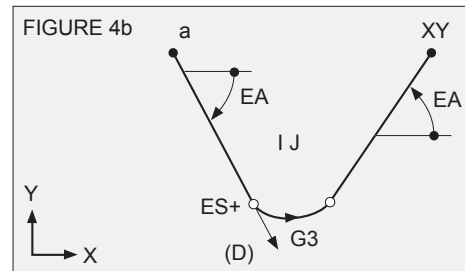
```
N.. G01 EA.. ES-
N.. G02/G03 I.. J.. R../X.. Y..
```



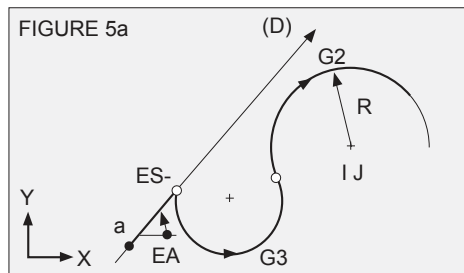
```
N.. G01 EA.. ES+
N.. G02/G03 I.. J.. R../X.. Y..
```



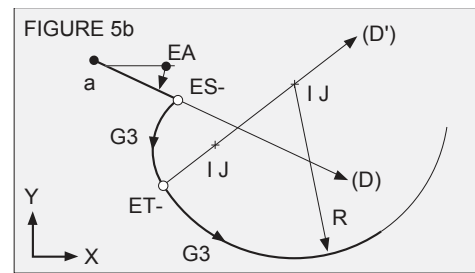
```
N.. G01 EA.. ES-
N.. G02/G03 I..J..
N.. G01 EA.. X.. Y..
```



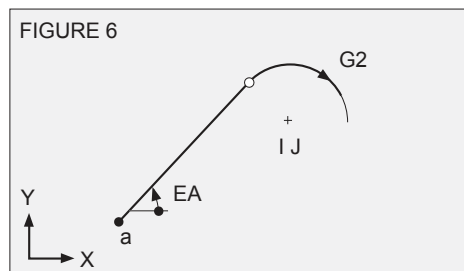
```
N.. G01 EA.. ES+
N.. G02/G03 I..J..
N.. G01 EA.. X.. Y..
```



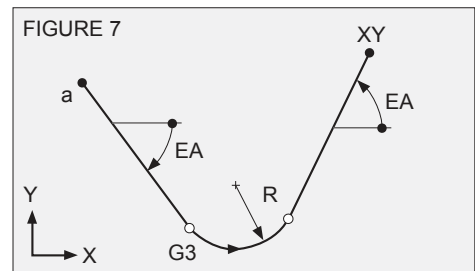
```
N.. G01 EA.. ES-
N.. G02/G03 I.. J..
N.. G02/G03 I.. J.. R../X.. Y..
```



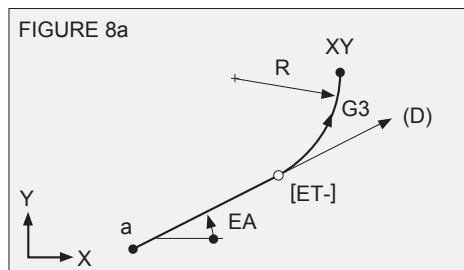
```
N.. G01 EA.. ES-
N.. G02/G03 I.. J.. ET-
N.. G02/G03 I.. J.. R../X.. Y..
```



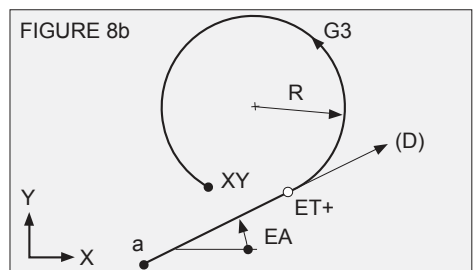
```
N.. G01 EA..
N.. G02/G03 I.. J..
```



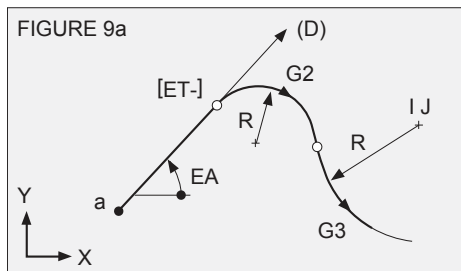
```
N.. G01 EA..
N.. G02/G03 R..
N.. G01 EA.. X.. Y..
```



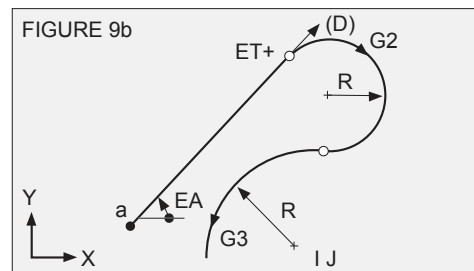
```
N.. G01 EA..
N.. G02/G03 R.. X.. Y..
```



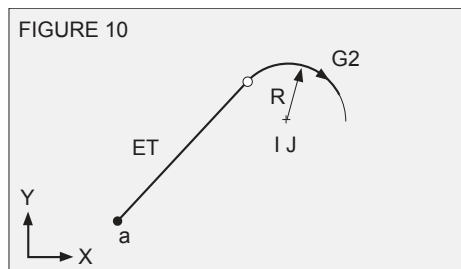
```
N.. G01 EA.. ET+
N.. G02/G03 R.. X.. Y..
```



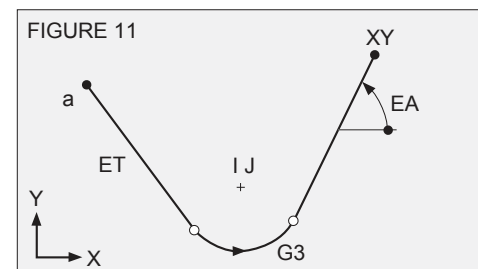
```
N.. G01 EA..
N.. G02/G03 R..
N.. G02/G03 I.. J.. R../X.. Y..
```



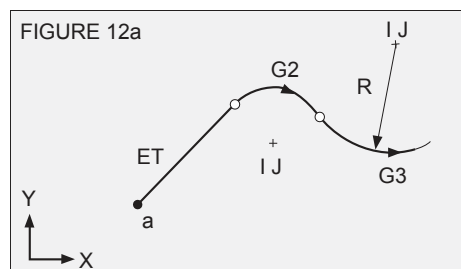
```
N.. G01 EA.. ET+
N.. G02/G03 R..
N.. G02/G03 I.. J.. R../X.. Y..
```



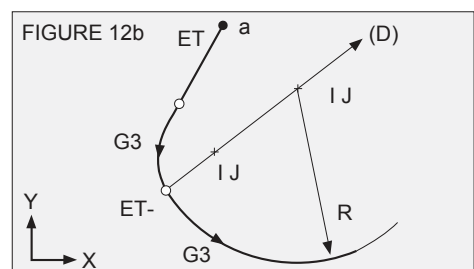
```
N.. G01 ET
N.. G02/G03 I.. J.. R../X.. Y..
```



```
N.. G01 ET
N.. G02/G03 I.. J..
N.. G01 EA.. X.. Y..
```

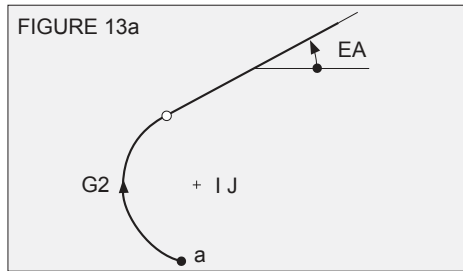


```
N.. G01 ET
N.. G02/G03 I.. J..
N.. G02/G03 I.. J.. R../X.. Y..
```

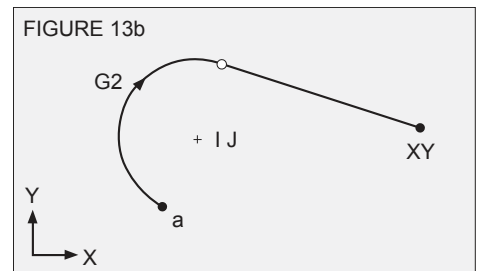


```
N.. G01 ET
N.. G02/G03 I.. J.. ET-
N.. G02/G03 I.. J.. R../X.. Y..
```

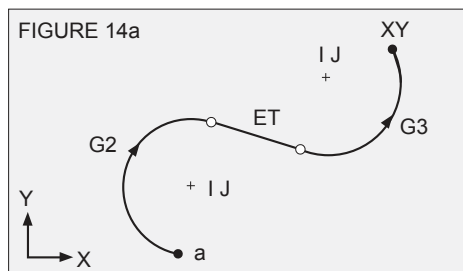
The first element is a circle (start point «a» is fully defined).



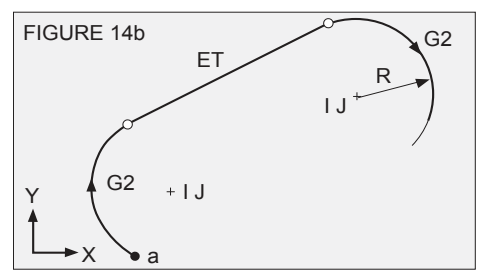
N.. G02/G03 I.. J..
N.. G01 EA..



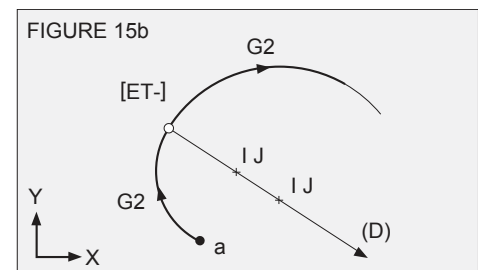
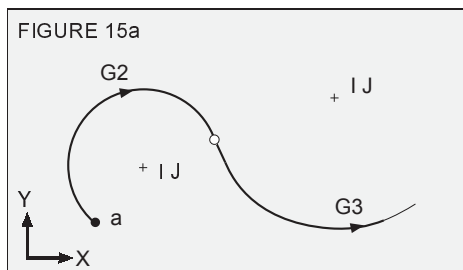
N.. G02/G03 I.. J..
N.. G01 X.. Y..

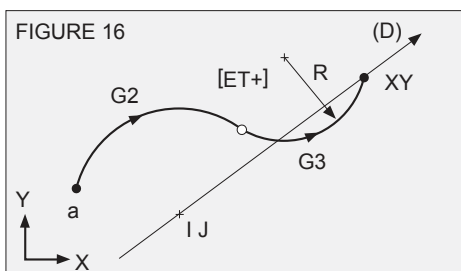


N.. G02/G03 I.. J..
N.. G01 ET
N.. G02/G03 I.. J.. R../X.. Y..

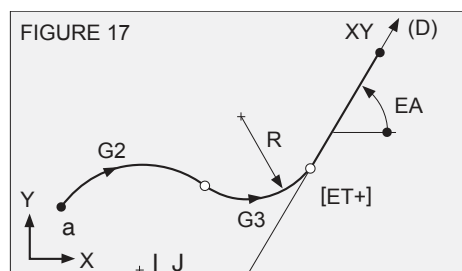


N.. G02/G03 I.. J..
N.. G01 ET
N.. G02/G03 I.. J.. R../X.. Y..

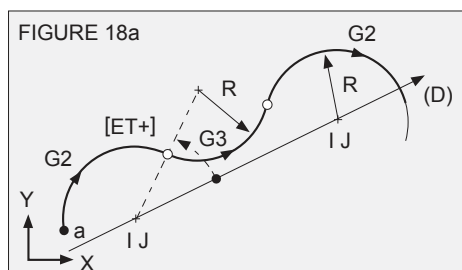




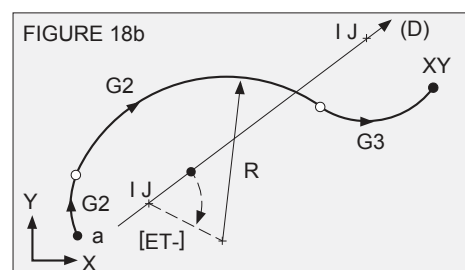
N.. G02/G03 I.. J..
N.. G02/G03 R.. X.. Y..



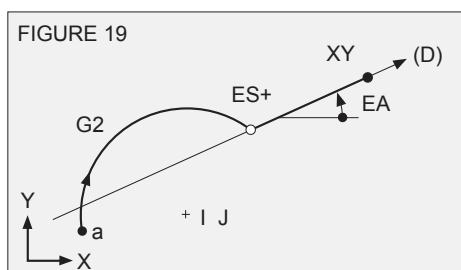
N.. G02/G03 I.. J..
N.. G02/G03 R..
N.. G01 EA.. X.. Y..



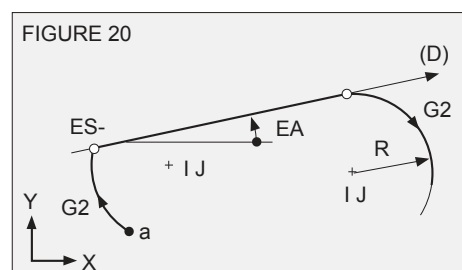
N.. G02/G03 I.. J..
N.. G02/G03 R..
N.. G02/G03 I.. J.. R../X.. Y..



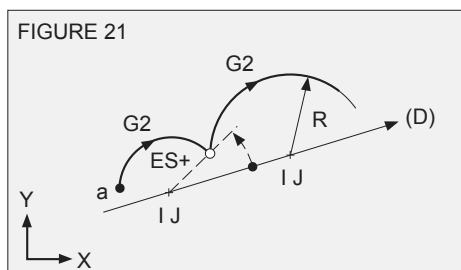
N.. G02/G03 I.. J..
N.. G02/G03 R..
N.. G02/G03 I.. J.. R../X.. Y..



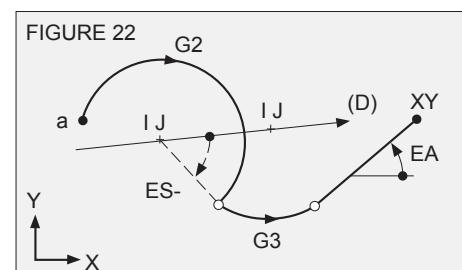
N.. G02/G03 I.. J.. ES+
N.. G01 EA.. X.. Y..



N.. G02/G03 I.. J.. ES-
N.. G01 EA..
N.. G02/G03 I.. J.. R../X.. Y..



N.. G02/G03 I.. J.. ES+
N.. G02/G03 I.. J.. R../X.. Y..



N.. G02/G03 I.. J.. ES-
N.. G02/G03 I.. J..
N.. G01 EA X.. Y..

1

2

3

4

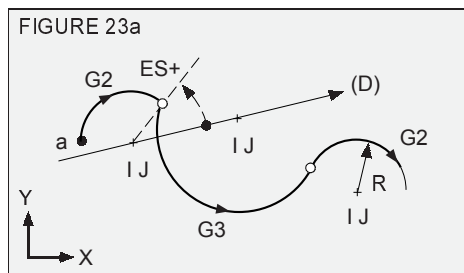
5

6

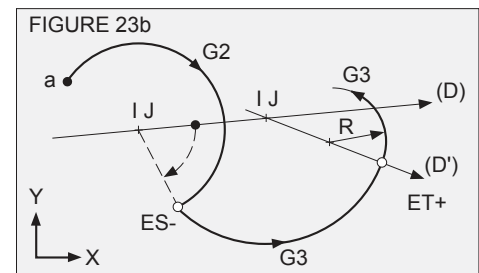
7

8

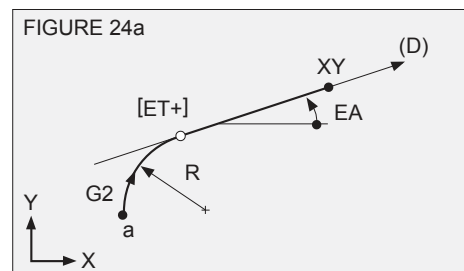
9



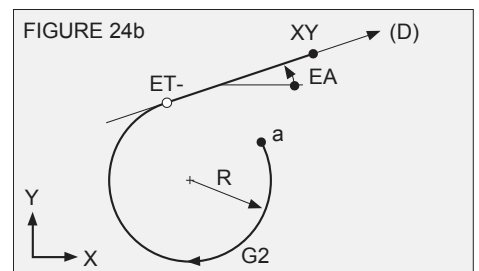
N.. G02/G03 I.. J.. ES+
 N.. G02/G03 I.. J..
 N.. G02/G03 I.. J.. R../X.. Y..



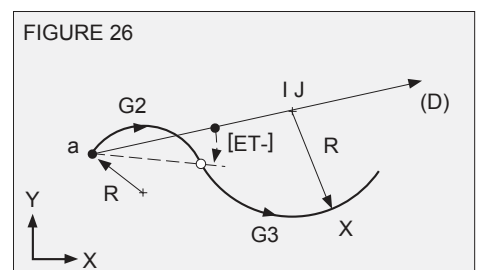
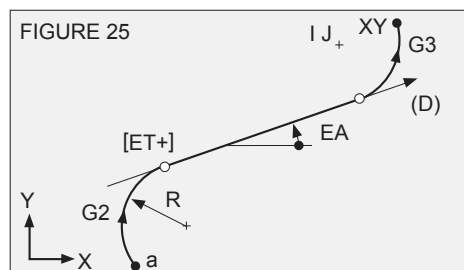
N.. G02/G03 I.. J.. ES-
 N.. G02/G03 I.. J.. ET+
 N.. G02/G03 I.. J.. R../X.. Y..

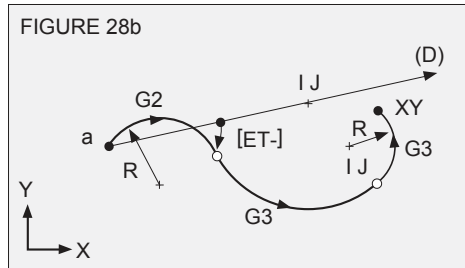
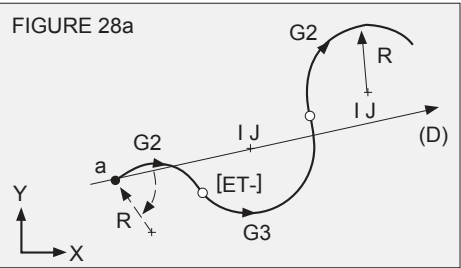
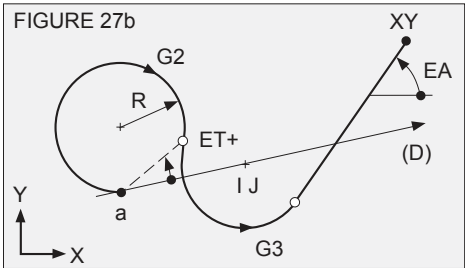
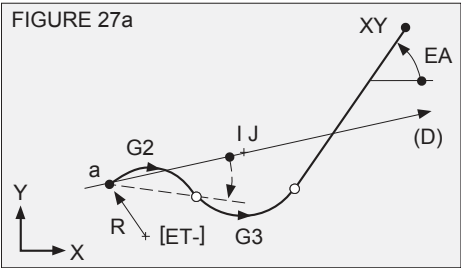


N.. G02/G03 R..
 N.. G01 EA.. X.. Y..



N.. G02/G03 R.. ET-
 N.. G01 EA.. X.. Y..





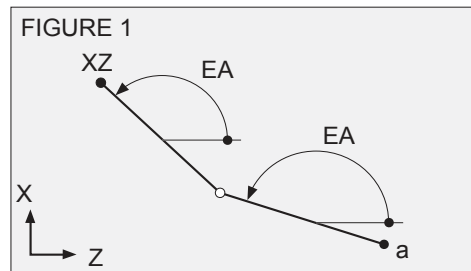
N.. G02/G03 R..
N.. G02/G03 I.. J..
N.. G02/G03 I.. J.. R../X.. Y..

N.. G02/G03 R..
N.. G02/G03 I.. J..
N.. G02/G03 I.. J.. R../X.. Y..

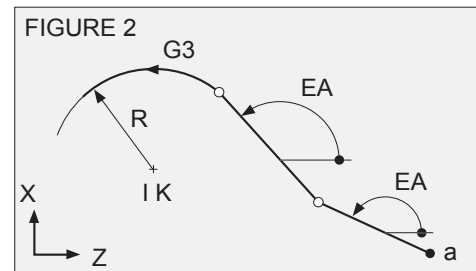


Geometric elements defined using the following block(s)

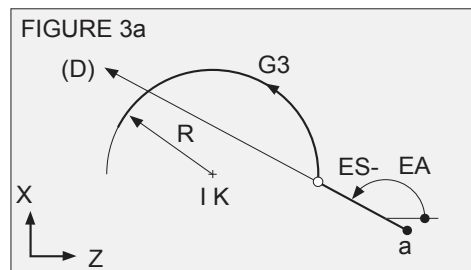
The first element is a line (start point «a» is fully defined).



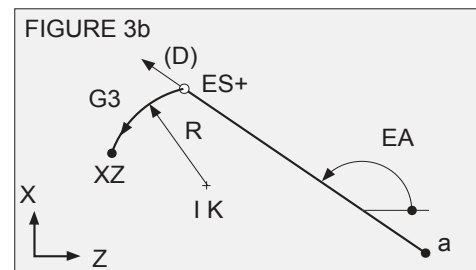
N.. G01 EA.. ES
N.. EA X.. Z..



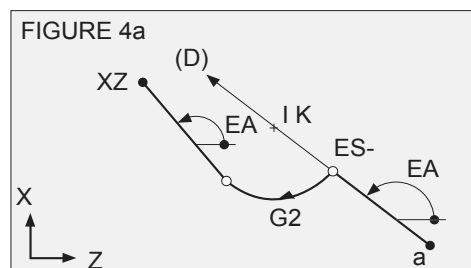
N.. G01 EA.. ES
N.. EA..
N.. G02/G03 I.. K.. R../X.. Z..



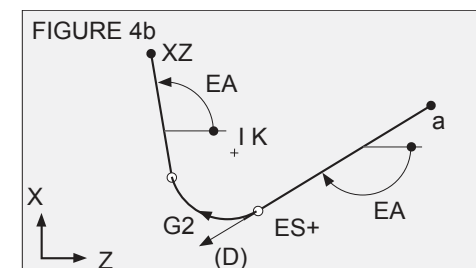
N.. G01 EA.. ES-
N.. G02/G03 I.. K.. R../X.. Z..



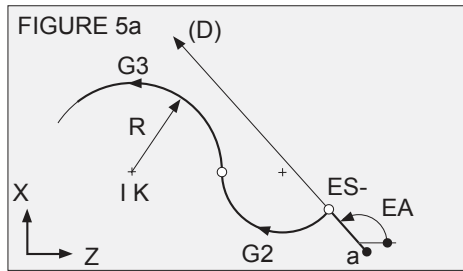
N.. G01 EA.. ES+
N.. G02/G03 I.. K.. R../X.. Z..



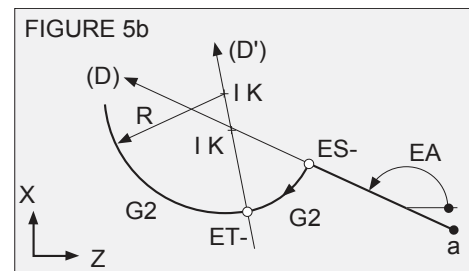
N.. G01 EA.. ES-
N.. G02/G03 I..K..
N.. G01 EA.. X.. Z..



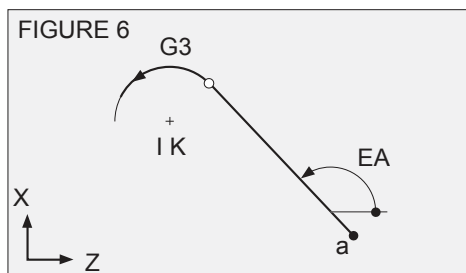
N.. G01 EA.. ES+
N.. G02/ G03 I..K..
N.. G01 EA.. X.. Z..



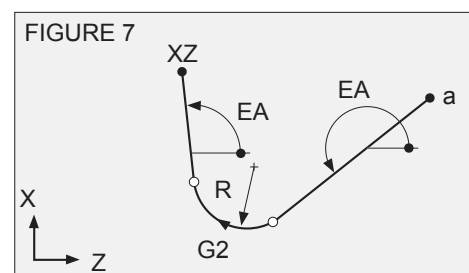
N.. G01 EA.. ES-
N.. G02/G03 I.. K..
N.. G02/G03 I.. K.. R../X.. Z..



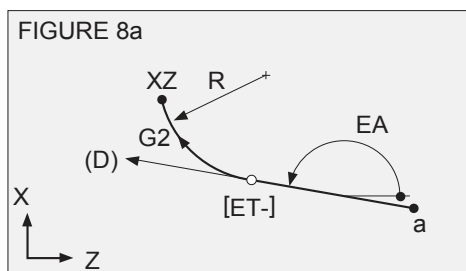
N.. G01 EA.. ES-
N.. G02/G03 I.. K.. ET-
N.. G02/G03 I.. K.. R../X.. Z..



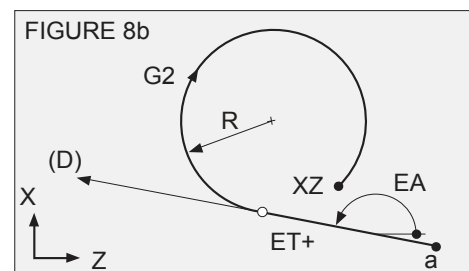
N.. G01 EA..
N.. G02/G03 I.. K..



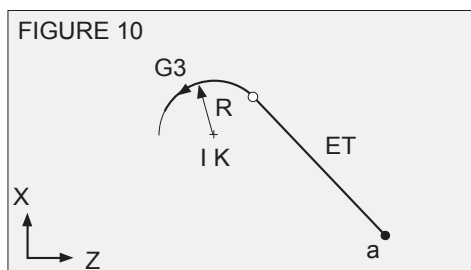
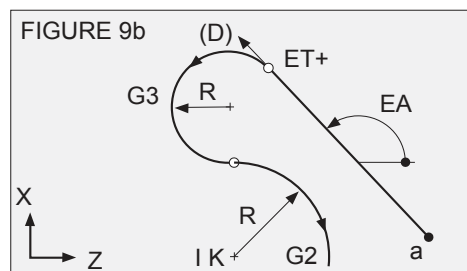
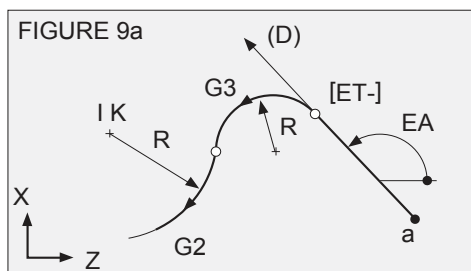
N.. G01 EA..
N.. G02/G03 R..
N.. G01 EA.. X.. Z..



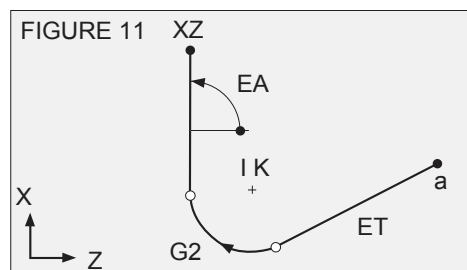
N.. G01 EA..
N.. G02/G03 R.. X.. Z..



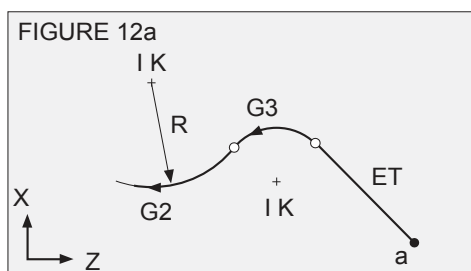
N.. G01 EA.. ET+
N.. G02/G03 R.. X.. Z..



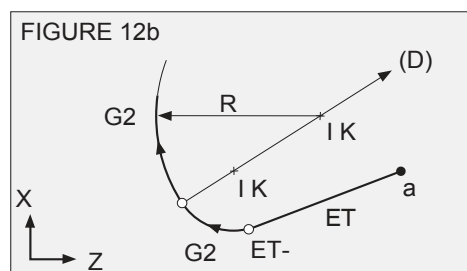
N.. G01 ET
N.. G02/G03 I.. K.. R../X.. Z..



N.. G01 ET
N.. G02/G03 I.. K..
N.. G01 EA.. X.. Z..

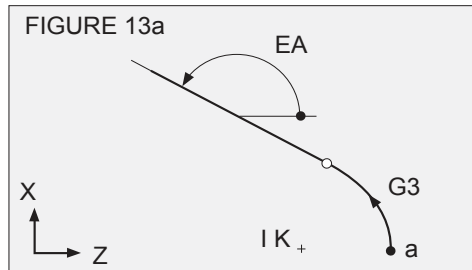


N.. G01 ET
N.. G02/G03 I.. K..
N.. G02/G03 I.. K.. R../X.. Z..

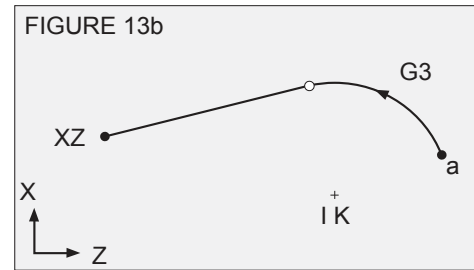


N.. G01 ET
N.. G02/G03 I.. K.. ET-
N.. G02/G03 I.. K.. R../X.. Z..

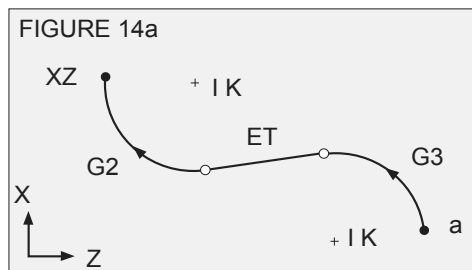
The first element is a circle (start point «a» is fully defined).



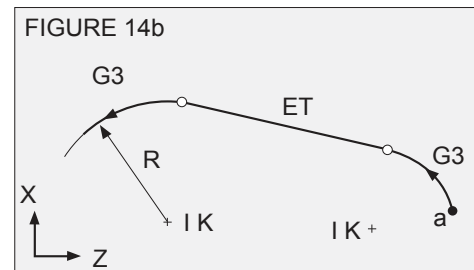
N.. G02/G03 I.. K..
N.. G01 EA..



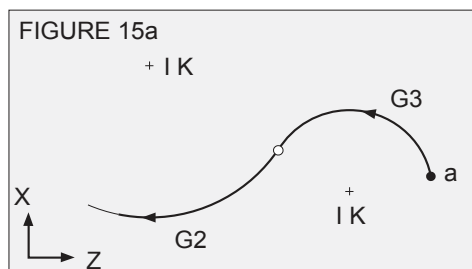
N.. G02/G03 I.. K..
N.. G01 X.. Z..



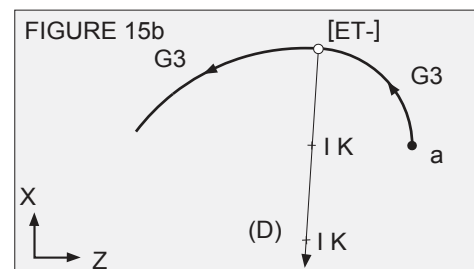
N.. G02/G03 I.. K..
N.. G01 ET
N.. G02/G03 I.. K.. R../X.. Z..



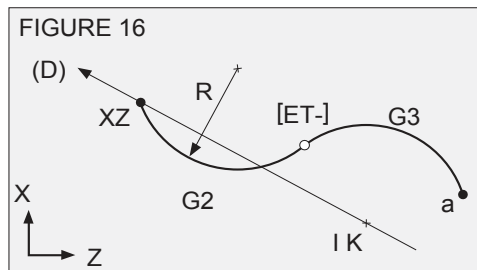
N.. G02/G03 I.. K..
N.. G01 ET
N.. G02/G03 I.. K.. R../X.. Z..



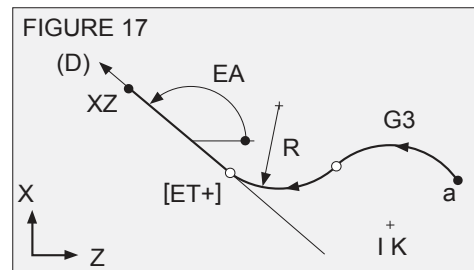
N.. G02/G03 I.. K..
N.. G02/G03 I.. K..



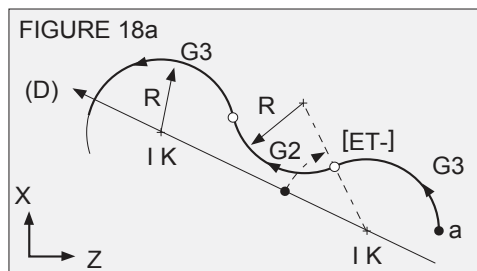
N.. G02/G03 I.. K..
N.. G02/G03 I.. K..



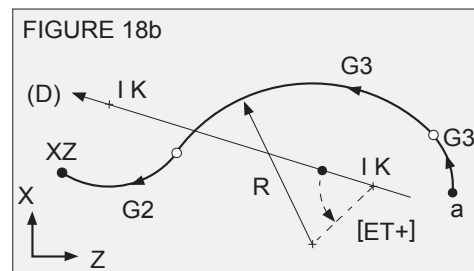
N.. G02/G03 I.. K..
N.. G02/G03 R.. X.. Z..



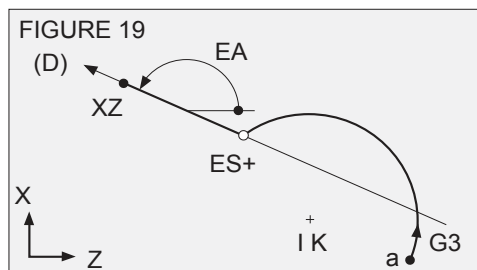
N.. G02/G03 I.. K..
N.. G02/G03 R..
N.. G01 EA.. X.. Z..



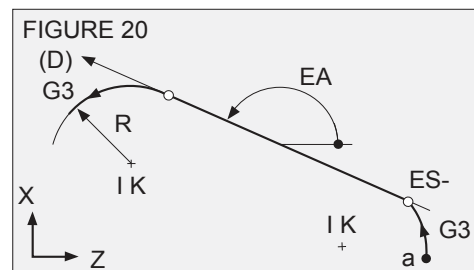
N.. G02/G03 I.. K..
N.. G02/G03 R..
N.. G02/G03 I.. K.. R../X.. Z..



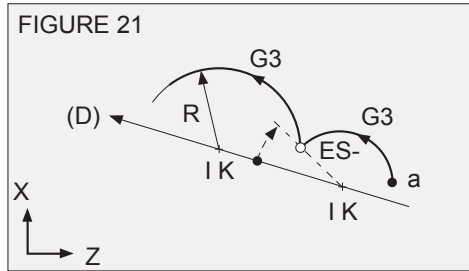
N.. G02/G03 I.. K..
N.. G02/G03 R..
N.. G02/G03 I.. K.. R../X.. Z..



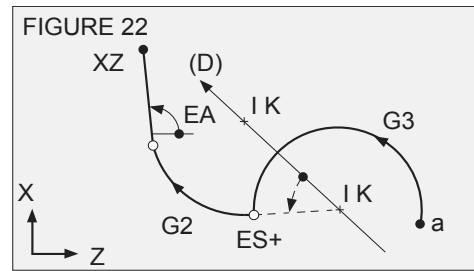
N.. G02/G03 I.. K.. ES+
N.. G01 EA.. X.. Z..



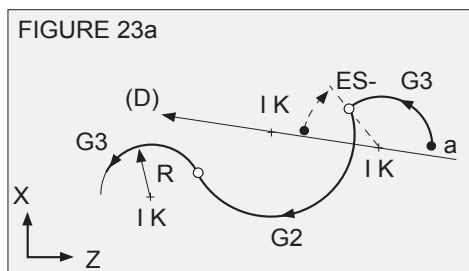
N.. G02/G03 I.. K.. ES-
N.. G01 EA..
N.. G02/G03 I.. K.. R../X.. Z..



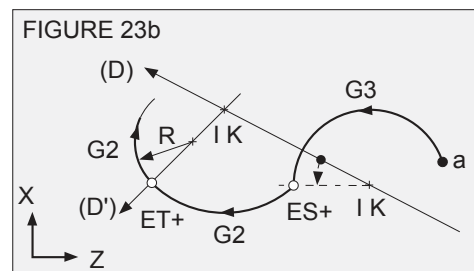
N.. G02/G03 I.. K.. ES-
N.. G02/G03 I.. K.. R../X.. Z..



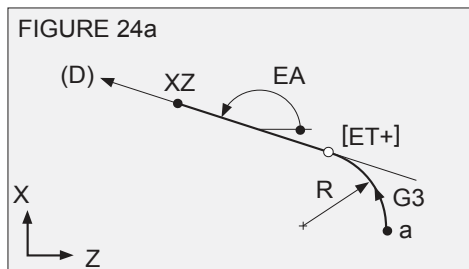
N.. G02/G03 I.. K.. ES+
N.. G02/G03 I.. K..
N.. G01 EA X.. Z..



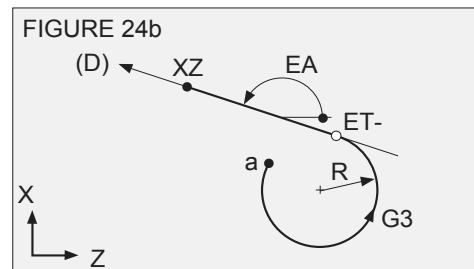
N.. G02/G03 I.. K.. ES-
N.. G02/G03 I.. K..
N.. G02/G03 I.. K.. R../X.. Z..



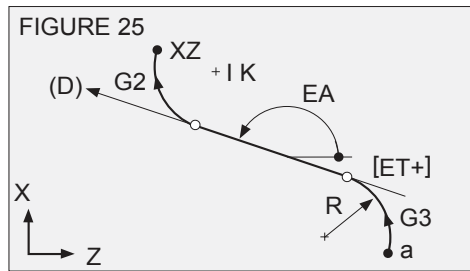
N.. G02/G03 I.. K.. ES+
N.. G02/G03 I.. K.. ET+
N.. G02/G03 I.. K.. R../X.. Z..



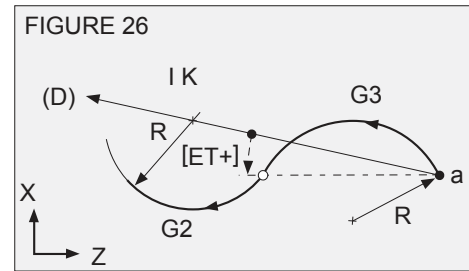
N.. G02/G03 R..
N.. G01 EA.. X.. Z..



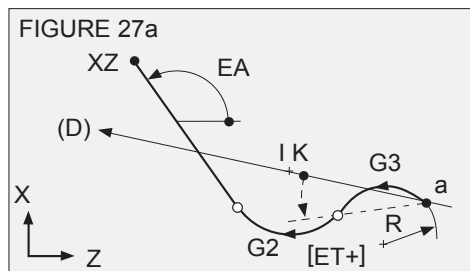
N.. G02/G03 R.. ET-
N.. G01 EA.. X.. Z..



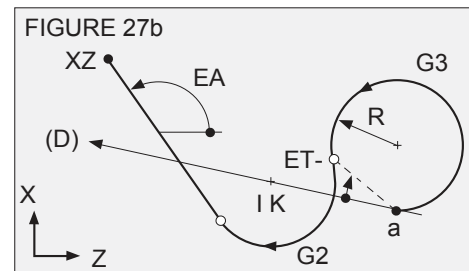
N.. G02/G03 R..
 N.. G01 EA..
 N.. G02/G03 I.. K.. R../X.. Z..



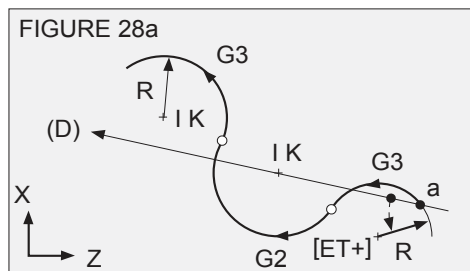
N.. G02/G03 R..
 N.. G02/G03 I.. K.. R../X.. Z..



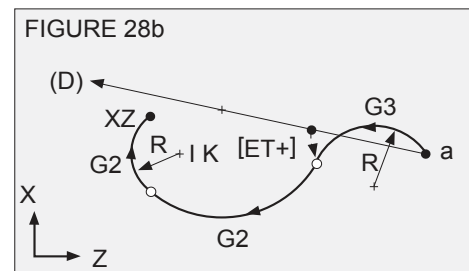
N.. G02/G03 R..
 N.. G02/G03 I.. K..
 N.. G01 EA.. X.. Z..



N.. G02/G03 R.. ET-
 N.. G02/G03 I.. K..
 N.. G01 EA.. X.. Z..



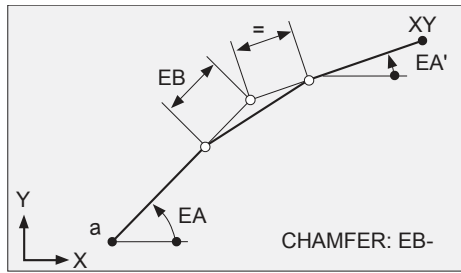
N.. G02/G03 R..
 N.. G02/G03 I.. K..
 N.. G02/G03 I.. K.. R../X.. Z..



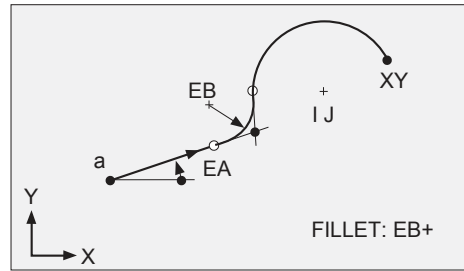
N.. G02/G03 R..
 N.. G02/G03 I.. K..
 N.. G02/G03 I.. K.. R../X.. Z..

6.1.3

Programming Chamfers and Fillets Between Two Elements



```
N.. G01 EA.. ES EB-..  
N.. G01 EA.. X.. Y..
```



```
N.. G01 EA.. ES- EB+..  
N.. G02/G03 I.. J.. X.. Y..
```

