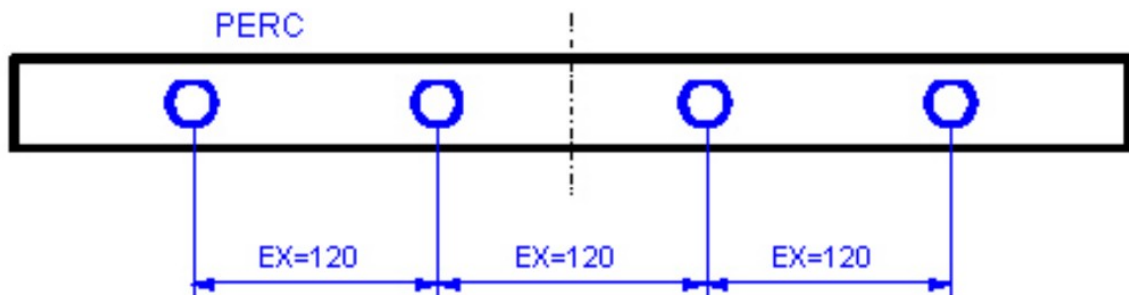


# ASTER - Examples of classical parametrized parts.

## Railing with fixed spacing

Holes centered, spacing = 120mm



	Formula	Comment
Spacing	120	Fixed spacing
Number	LG/EX	Whole part of the length divided by the spacing
Position	$(LG-EX*(NB-1))/2$	<p>Half the difference between the length and the number of intervals multiplied by the spacing.</p> <p>NB-1 is the number of intervals  <math>EX*(NB-1)</math> is the number of intervals multiplied by the spacing</p>

Sheet piece set (Modif)

Name: FIXED\_SPACING Description: Spacing = 120mm

Profile: T100 Stop possible: L Length mini: 200,00 Length maxi: 6 000,00

Parameters Machining

Machining	Description	Number (NB)	Position (POS)	Spacing (EX)
D20	DIAMETER 20	LG/EX	$(LG-EX*(NB-1))/2$	120

Available variables

LG = Length of the part  
 NB = Number of machining operation  
 POS = Position of machining operation  
 EX = Center distance of machining operations  
 BU = Stop number  
 P1 =  
 P2 =  
 P3 =

P4 =  
 P5 =  
 P6 =  
 P7 =  
 P8 =  
 P9 =  
 P10 =

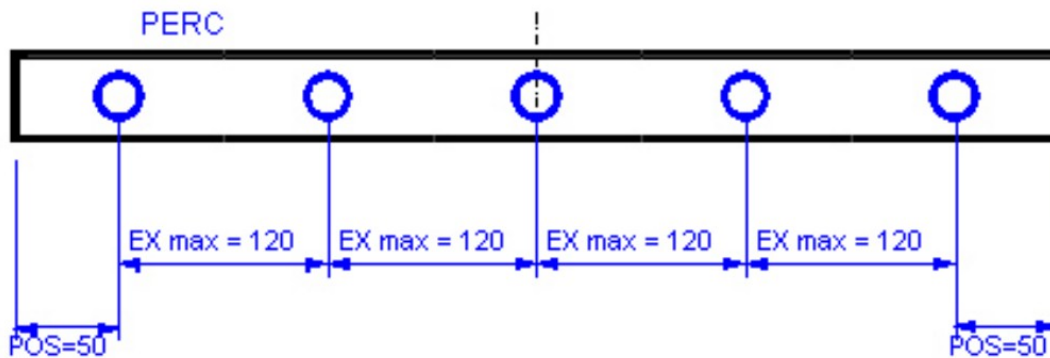
Move up OP  
 Move down OP  
 Add OP  
 Delete OP  
 Test

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Cancel OK

# Railing with maximum spacing

Holes at 50mm from each end, maximum spacing = 120mm,



	Formula	Comment
Position	50	Fixed position of first hole
Number	$2+(LG-2*POS)/120$	Maximum spacing gives the number :  Distance between the 2 end holes divided by the maximum spacing gives the number of intermediate holes To these must be added the 2 end holes
Spacing	$(LG-2*POS)/(NB-1)$	Distance between the 2 end holes divided by the number of intervals

Sheet piece set (Modif)

Name: MAX\_SPACING Description: 50mm from each end, maximum spacing = 120mm. ☐ Disabled

Profile: T100 Stop possible: L Length mini: 200.00 Length maxi: 6 000.00 ☐ Position given from the stop

Parameters Machining

Machining	Description	Number (NB)	Position (POS)	Spacing (EX)
D20	DIAMETER 20	$2+(LG-2*POS)/120$	50	$(LG-2*POS)/(NB-1)$

Available variables

LG = Length of the part  
NB = Number of machining operation  
POS = Position of machining operation  
EX = Center distance of machining operations  
BU = Stop number  
P1 =  
P2 =  
P3 =  
P4 =  
P5 =  
P6 =  
P7 =  
P8 =  
P9 =  
P10 =

Move up OP  
Move down OP  
Add OP  
Delete OP  
Test

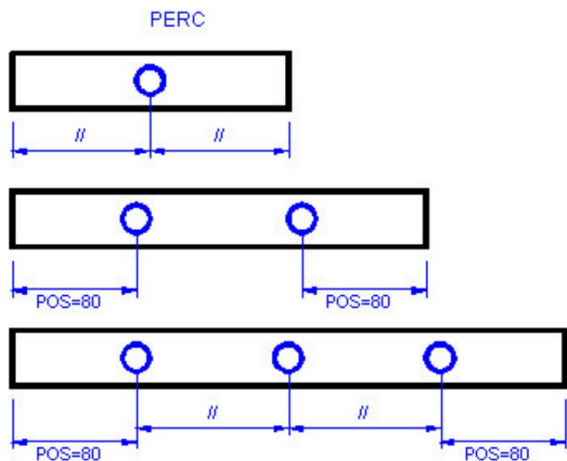
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## Positions given by rules

A hole in the center for parts less than 300mm

Two holes 80mm from each end for parts between 300 and 600mm

Two holes 80mm from each end and one hole in the center for parts over 600mm



	Formula	Comment
Number	$1 * (LG < 300)$	Equal 1 if the length is smaller than 300mm Equal 0 otherwise  Nota : $(LG < 300)$ is 1 if true, 0 if false
Position	$LG/2$	Middle of the part
Number	$2 * (300 \leq LG < 600)$	Equal 2 if length is in interval $[300, 600\text{mm}]$ Equal 0 otherwise  Nota : $(300 \leq LG < 600)$ is 1 if true, 0 if false
Spacing	$LG - 2 * POS$	Distance between the 2 end holes
Number	$3 * (LG \geq 600)$	Equal 3 if length is bigger than 600 Equal 0 otherwise  Nota : $(LG \geq 600)$ is 1 if true, 0 if false
Spacing	$(LG - 2 * POS) / 2$	Distance between the 2 end holes divided by the number of intervals

Sheet piece set (Modif)

Name: RULE\_SPACING Description: Spacing given by rules: one centered hole if length < 300mm, 2 hole at 80mm from the ends if length < 600mm ☐ Disabled

Profile: T100 Stop possible: L Length mini: 200.00 Length maxi: 6 000.00 ☐ Position given from the stop

Parameters Machining

Machining	Description	Number (NB)	Position (POS)	Spacing (EX)
D20	DIAMETER 20	1 * (LG<300)	LG/2	0
D20	DIAMETER 20	2 * (300<=LG<600)	80	LG-2*POS
D20	DIAMETER 20	3 * (LG>=600)	80	(LG-2*POS)/2

Available variables

LG = Length of the part  
 NB = Number of machining operation  
 POS = Position of machining operation  
 EX = Center distance of machining operations  
 BU = Stop number  
 P1 =  
 P2 =  
 P3 =

P4 =  
 P5 =  
 P6 =  
 P7 =  
 P8 =  
 P9 =  
 P10 =

Move up OP  
 Move down OP  
 Add OP  
 Delete OP  
 Test

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# Syntax of formulas

The available functions and operators are described in the Windev help :

[Arithmetic operators](https://doc.windev.com/en-US/?1512008&name=arithmetic_operators) : [https://doc.windev.com/en-US/?1512008&name=arithmetic\\_operators](https://doc.windev.com/en-US/?1512008&name=arithmetic_operators)

[Comparison operators](https://doc.windev.com/en-US/?1512006&name=comparison_operators) : [https://doc.windev.com/en-US/?1512006&name=comparison\\_operators](https://doc.windev.com/en-US/?1512006&name=comparison_operators)

[Math functions](https://doc.windev.com/en-US/?3050016) : <https://doc.windev.com/en-US/?3050016>