

ProCAM

**PCL Macros
Parameter drawings**



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Revision history

Version	Date	Author	Comment
V1.02	21-01-2014	AH	<p>Derived from V1.01</p> <ul style="list-style-type: none">- Replaced chapter 1 (General) by Chapter (Parameter definitions)- Added parameter C to macro 22, macro 12- Added excess parameter- Changed BEVW / BEVF into s1/ws1/s2/ws2 definition- Added T bar macros- Updated bend line macro definition
V1.03	17-02-2014	SE	<p>Derived from V1.02</p> <ul style="list-style-type: none">- Changed document lay out- Paper size from US Letter to A4- Extended margins- Placed new HGG logo- Removed double end macro 21- Changed order of macros to 10's, 20's and 30's- Corrected chapter numbers, now begins with chapter 1- Corrected missing chapter 2.4 should be 2.3 (now 3.3)

1 End cut macros

1.1 Flat bar

Macro 10

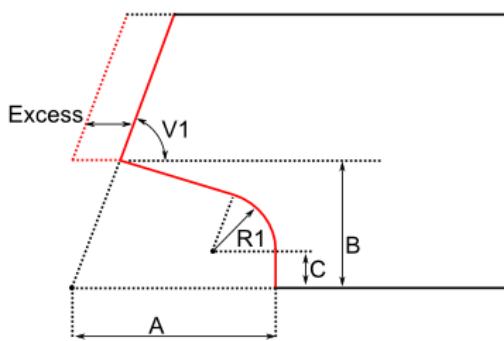
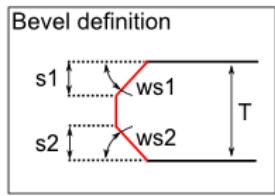
Bevel definition			Parameter Range		
			Min	Max	
s1	ws1	T	a	0	100000
s2	ws2		b	0	100000
			c	0	100000
			v1	0	100000
			excess	0	100
			s1	0	80
			s2	0	80
			ws1	45	90
			ws2	45	90

Comments:

Macro 11

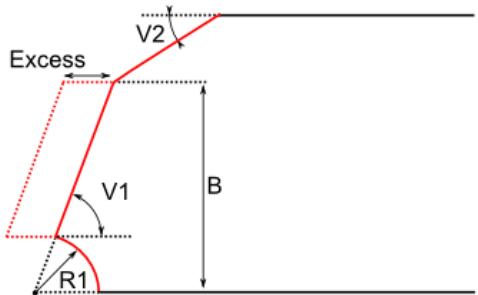
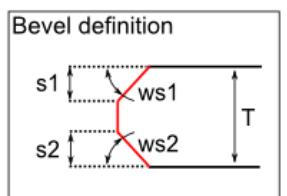
Bevel definition			Parameter Range		
			Min	Max	
s1	ws1	T	r1	-100000	100000
s2	ws2		r2	-100000	100000
			v1	1.0	179
			excess	0	100
			s1	0	80
			s2	0	80
			ws1	45	90
			ws2	45	90

Comments:

Macro 12

Parameter Range

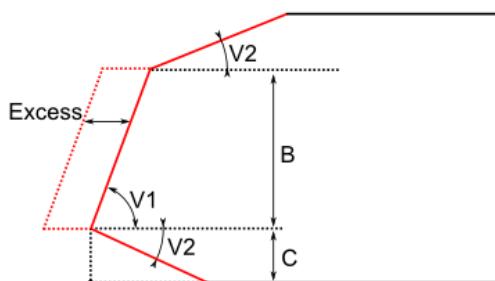
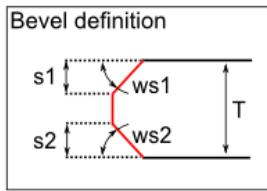
	Min	Max
a	0	100000
b	0	100000
v1	1	179
r1	-100000	100000
excess	0	100
s1	0	80
s2	0	80
ws1	45	90
ws2	45	90

Comments:

Macro 13

Parameter Range

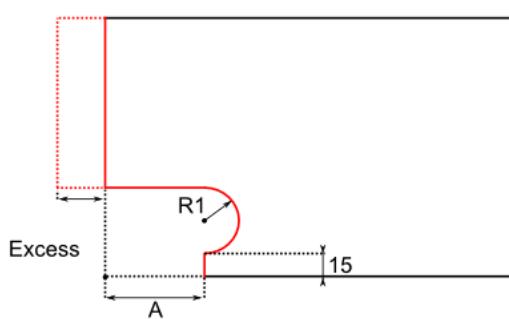
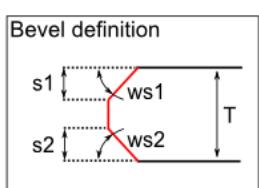
	Min	Max
b	0	100000
v1	1	179
v2	1	179
r1	-100000	100000
excess	0	100
s1	0	80
s2	0	80
ws1	45	90
ws2	45	90

Comments:

Macro 14

Parameter Range

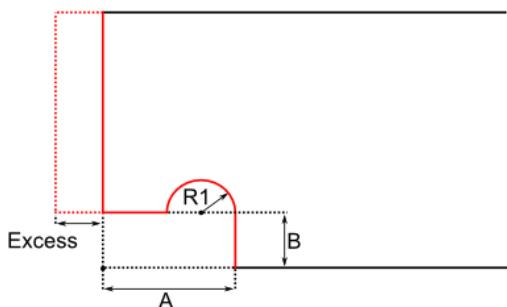
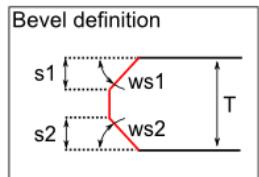
	Min	Max
b	0	100000
c	0	100000
v1	1	179
v2	1	179
excess	0	100
s1	0	80
s2	0	80
ws1	45	90
ws2	45	90

Comments:

Macro 15

Parameter Range

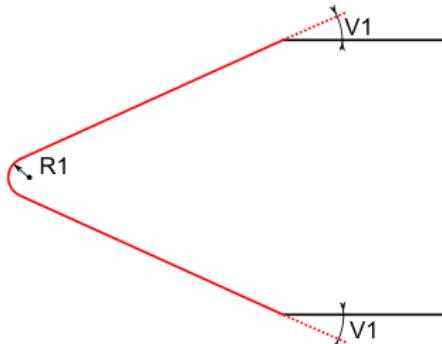
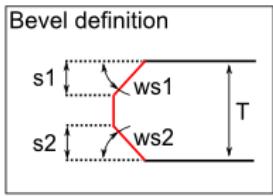
	Min	Max
a	0	100000
r1	-100000	100000
excess	0	100
s1	0	80
s2	0	80
ws1	45	90
ws2	45	90

Comments:

Macro 16

Parameter Range

	Min	Max
a	0	100000
b	0	100000
r1	-100000	100000
excess	0	100
s1	0	80
s2	0	80
ws1	45	90
ws2	45	90

Comments:

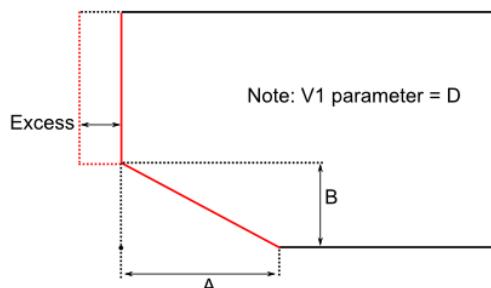
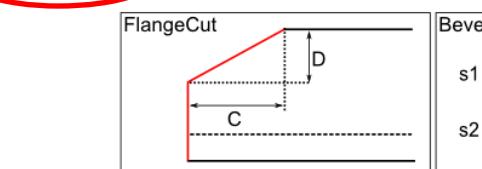
Macro 17

Parameter Range

	Min	Max
r1	-100000	100000
v1	1	179
excess	0	100
s1	0	80
s2	0	80
ws1	45	90
ws2	45	90

Comments:

1.2 Bulb/L-bar

Macro 20

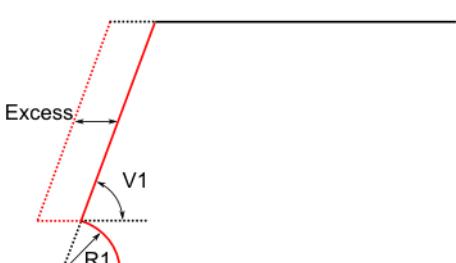
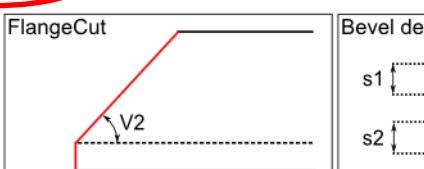


Parameter Range

	Min	Max
a	0.0	100000
b	0.0	100000
c	0.0	100000
v1	0.0	100000
excess	0	100
s1	0	80
s2	0	80
ws1	45	90
ws2	45	90
f1_s1	0	80
f1_s2	0	80
f1_ws1	45	90
f1_ws2	45	90

Comments:

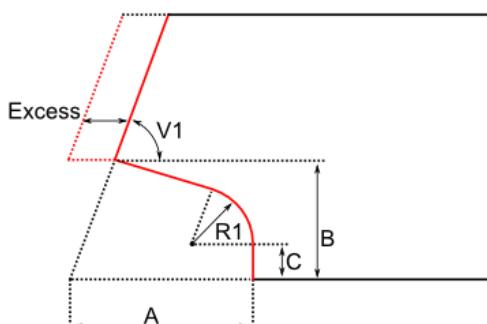
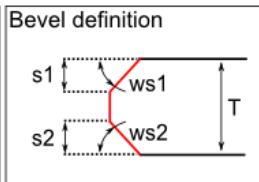
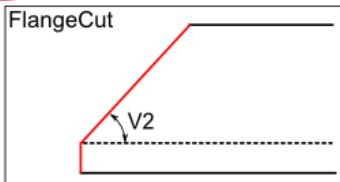
Macro 21



Parameter Range

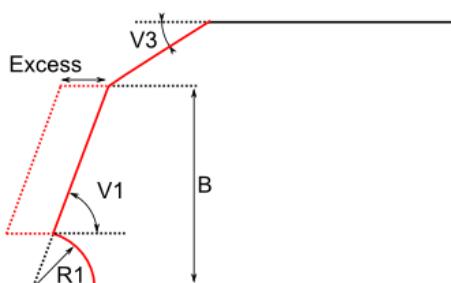
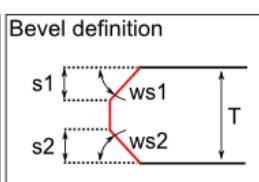
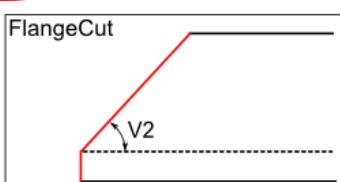
	Min	Max
v1	1.0	179
v2	1.0	179
r1	-100000	100000
excess	0	100
s1	0	80
s2	0	80
ws1	45	90
ws2	45	90
f1_s1	0	80
f1_s2	0	80
f1_ws1	45	90
f1_ws2	45	90

Comments:

Macro 22

Parameter Range

	Min	Max
a	0	100000
b	0	100000
c	0	100000
v1	1	179
v2	1	179
r1	-100000	100000
excess	0	100
s1	0	80
s2	0	80
ws1	45	90
ws2	45	90
f1_s1	0	80
f1_s2	0	80
f1_ws1	45	90
f1_ws2	45	90

Comments:

Macro 23

Parameter Range

	Min	Max
b	0	100000
v1	1	179
r1	-100000	10000
v2	1	179
v3	1	90
excess	0	100
s1	0	80
s2	0	80
ws1	45	90
ws2	45	90
f1_s1	0	80
f1_s2	0	80
f1_ws1	45	90
f1_ws2	45	90

Comments:

Macro 24

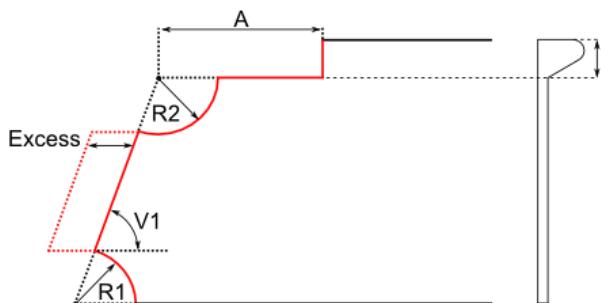
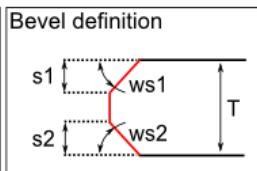
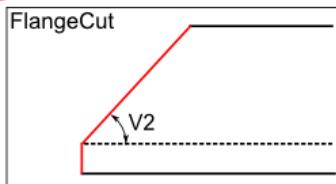
Comments:

	Min	Max
b	0	100000
v1	1.0	179
v2	1	89
r1	-100000	100000
excess	0	200
s1	0	80
s2	0	80
ws1	45	90
ws2	45	90
f1_s1	0	80
f1_s2	0	80
f1_ws1	45	90
f1_ws2	45	90

Macro 25

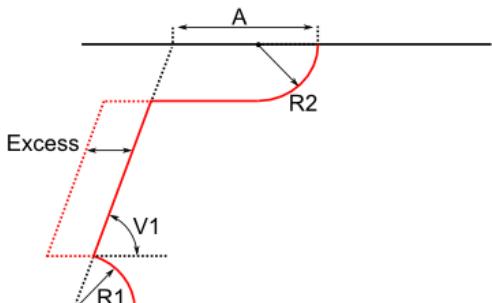
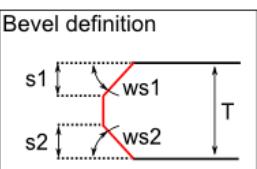
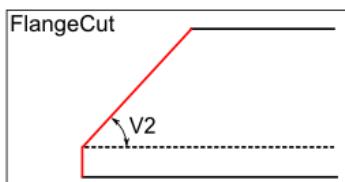
Comments:

	Min	Max
b	0	100000
c	0	100000
v1	1	179
v2	1	89
v3	1	89
r1	-100000	100000
excess	0	200
s1	0	80
s2	0	80
ws1	45	90
ws2	45	90
f1_s1	0	80
f1_s2	0	80
f1_ws1	45	90
f1_ws2	45	90

Macro 26

Parameter Range

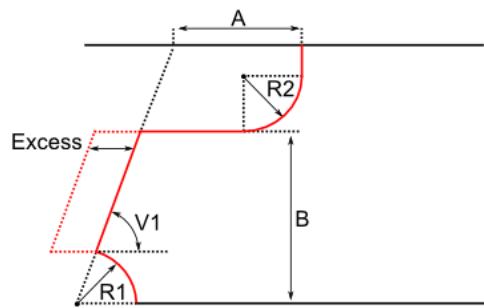
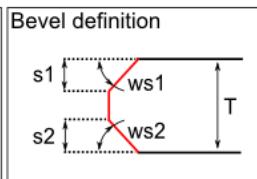
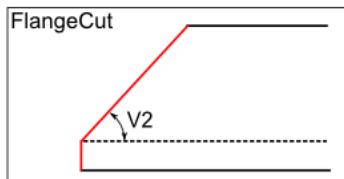
	Min	Max
a	0	100000
v1	1	179
v2	1	179
r1	-100000	100000
r2	-100000	100000
excess	0	100
s1	0	80
s2	0	80
ws1	45	90
ws2	45	90
f1_s1	0	80
f1_s2	0	80
f1_ws1	45	90
f1_ws2	45	90

Comments:

Macro 27

Parameter Range

	Min	Max
a	0	100000
v1	1	179
v2	1	179
r1	-100000	100000
r2	-100000	100000
excess	0	100
s1	0	80
s2	0	80
ws1	45	90
ws2	45	90
f1_s1	0	80
f1_s2	0	80
f1_ws1	45	90
f1_ws2	45	90

Comments:

Macro 28

Parameter Range

	Min	Max
a	0	100000
b	0	100000
v1	1	179
v2	1	179
r1	-100000	100000
r2	-100000	100000
excess	0	100
s1	0	80
s2	0	80
ws1	45	90
ws2	45	90
f1_s1	0	80
f1_s2	0	80
f1_ws1	45	90
f1_ws2	45	90

Comments:

1.3 T bar

Macro 31

Parameter Range		
	Min	Max
c	0	100000
r1	-100000	100000
v1	1	179
v2	1	179
v3	1	179
v4	1	179
excess	0	100
s1	0	80
s2	0	80
ws1	45	90
ws2	45	90
f1_s1	0	80
f1_s2	0	80
f1_ws1	45	90
f1_ws2	45	90

Comments:

Macro 33

Parameter Range		
	Min	Max
b	0	100000
c	0	100000
r1	-100000	100000
v1	1	179
v2	1	179
v3	1	179
excess	0	100
s1	0	80
s2	0	80
ws1	45	90
ws2	45	90
f1_s1	0	80
f1_s2	0	80
f1_ws1	45	90
f1_ws2	45	90

Comments:



Macro 36	Parameter Range																								
	<table border="1"><thead><tr><th></th><th>Min</th><th>Max</th></tr></thead><tbody><tr><td>B</td><td>0</td><td>100000</td></tr><tr><td>C</td><td>0</td><td>100000</td></tr><tr><td>R1</td><td>-100000</td><td>100000</td></tr><tr><td>V1</td><td>1</td><td>179</td></tr><tr><td>V2</td><td>1</td><td>179</td></tr><tr><td>V3</td><td>1</td><td>179</td></tr><tr><td>V4</td><td>1</td><td>179</td></tr></tbody></table>		Min	Max	B	0	100000	C	0	100000	R1	-100000	100000	V1	1	179	V2	1	179	V3	1	179	V4	1	179
	Min	Max																							
B	0	100000																							
C	0	100000																							
R1	-100000	100000																							
V1	1	179																							
V2	1	179																							
V3	1	179																							
V4	1	179																							
Comments:																									

Macro 35

Parameter Range		
	Min	Max
r1	-100000	100000
a	0	100000
b	0	100000
c	0	100000
v1	1	179
v2	1	179
v4	1	179
excess	0	100
s1	0	80
s2	0	80
ws1	45	90
ws2	45	90
f1_s1	0	80
f1_s2	0	80
f1_ws1	45	90
f1_ws2	45	90

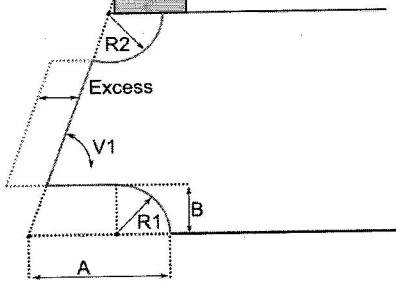
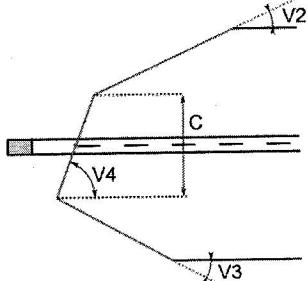
Comments: D = 10mm

Macro 38

Parameter Range		
	Min	Max
r1	-100000	100000
b	0	400
c	0	100000
v1	1	179
v2	1	179
v3	1	179
excess	0	100
s1	0	80
s2	0	80
ws1	45	90
ws2	45	90
f1_s1	0	80
f1_s2	0	80
f1_ws1	45	90
f1_ws2	45	90

Comments:

Macro 49		
Parameter Range		
A	Min	Max
B	0	100000
C	0	100000
R1	-100000	100000
R2	-100000	100000
V1	1	179
V2	1	179
V3	1	179
V4	1	179

Comments:
Parameter C is only applied to the flange (Differs from definition in CoP 10.2.7)

Macro 143	Parameter Range
A	Min 0 Max 100000
B	Min 0 Max 100000
C	Min 0 Max 100000
V1	Min 1 Max 179
V2	Min 1 Max 179
V4	Min 1 Max 179
R1	Min -100000 Max 100000
R2	Min -100000 Max 100000

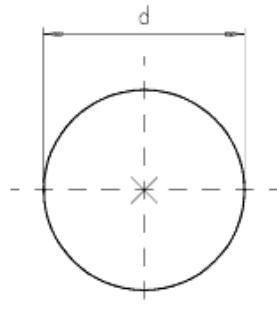
Comments:

2.3. Bulb / L-bar end cut macros

Macro 20	Parameter Range																					
	<table border="1"> <thead> <tr> <th></th><th>Min</th><th>Max</th></tr> </thead> <tbody> <tr> <td>A</td><td>0.0</td><td>100000</td></tr> <tr> <td>B</td><td>0.0</td><td>100000</td></tr> <tr> <td>C</td><td>0.0</td><td>100000</td></tr> <tr> <td>V1</td><td>0.0</td><td>100000</td></tr> <tr> <td>BEVW</td><td>-45</td><td>45</td></tr> <tr> <td>BEVF</td><td>-45</td><td>45</td></tr> </tbody> </table>		Min	Max	A	0.0	100000	B	0.0	100000	C	0.0	100000	V1	0.0	100000	BEVW	-45	45	BEVF	-45	45
	Min	Max																				
A	0.0	100000																				
B	0.0	100000																				
C	0.0	100000																				
V1	0.0	100000																				
BEVW	-45	45																				
BEVF	-45	45																				
Comments:																						

2 Intermediate macros

Macro D

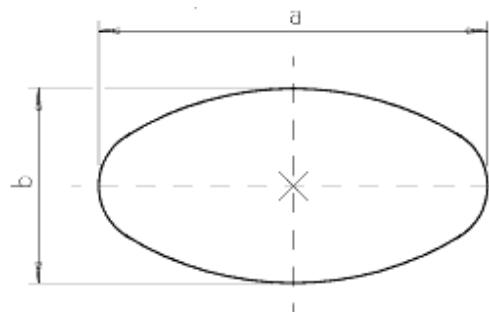


Parameter Range

	Min	Max
VL	0	100000
ROT	0	359
D	0	100000

Comments:

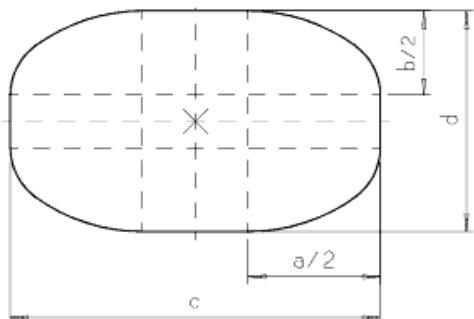
Macro HE



Parameter Range

	Min	Max
VL	0	100000
ROT	0	359
A	0	100000
B	0	100000

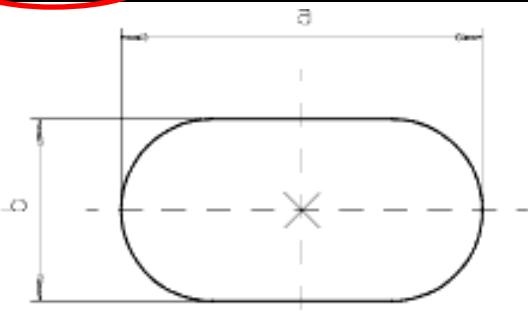
Comments:

Macro HER


Parameter Range

	Min	Max
VL	0	100000
ROT	0	359
C	0	100000
D	0	100000
A	0	100000
B	0	100000

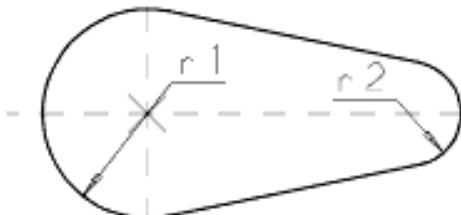
Comments:

Macro HO


Parameter Range

	Min	Max
VL	0	100000
ROT	0	359
A	0	100000
B	0	100000

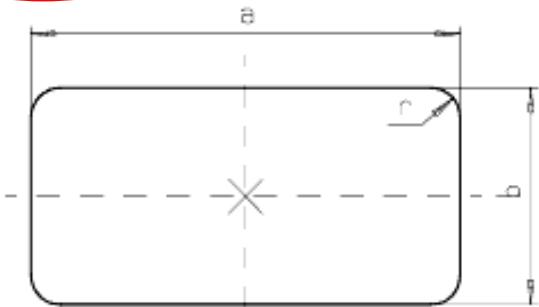
Comments:

Macro HOR


Parameter Range

	Min	Max
VL	0	100000
ROT	0	359
A	0	100000
R1	0	100000
R2	0	100000

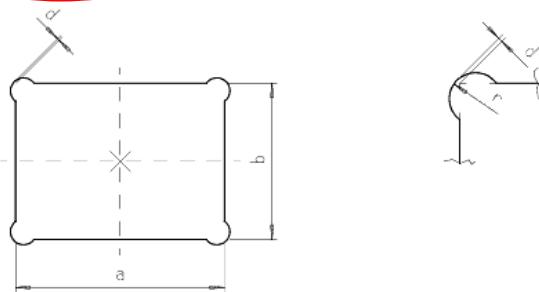
Comments:

Macro HR


Parameter Range

	Min	Max
VL	0	100000
ROT	0	359
A	0	100000
B	0	100000
R	0	100000

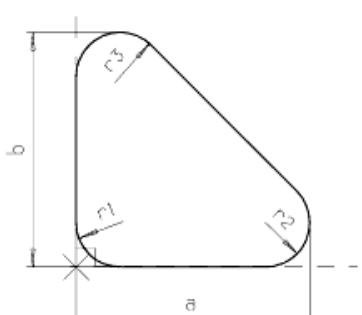
Comments:

Macro HRM


Parameter Range

	Min	Max
VL	0	100000
ROT	0	359
A	0	100000
B	0	100000
R	0	100000
D	0	100000

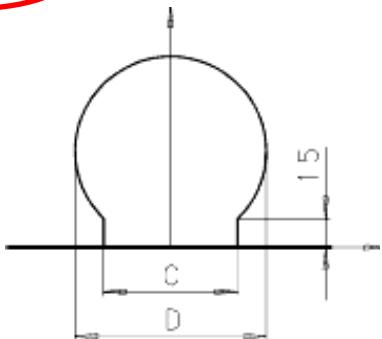
Comments:

Macro HT


Parameter Range

	Min	Max
VL	0	100000
ROT	-359	359
A	0	100000
B	0	100000
R1	0	100000
R2	0	100000
R3	0	100000

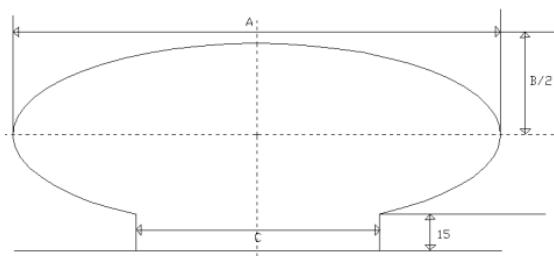
Comments:

Macro KD


Parameter Range

	Min	Max
VL	-100000	100000
ROT	0	360
C	0	100000
D	0	100000

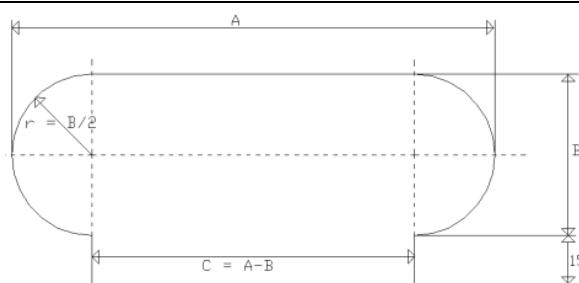
Comments: The ROT and VL parameters do not have a function for this shape.

Macro KE


Parameter Range

	Min	Max
VL	0	100000
ROT	0	359
A	0	100000
B	0	100000
C	0	100000

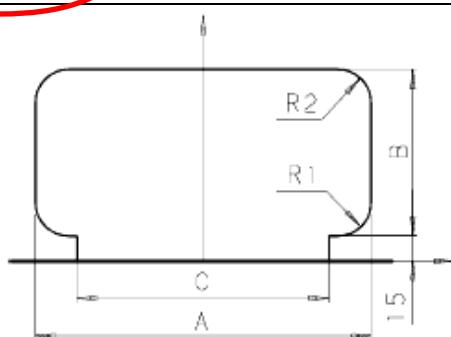
Comments: The ROT and VL parameters do not have a function for this shape.

Macro KO


Parameter Range

	Min	Max
VL	0	100000
ROT	0	359
A	0	100000
B	0	100000

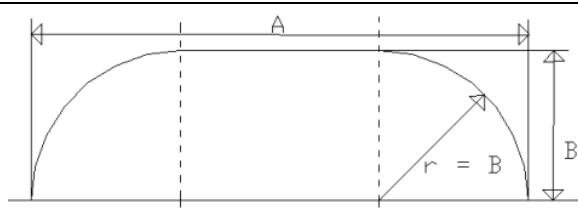
Comments: The ROT and VL parameters do not have a function for this shape.

Macro KR


Parameter Range

	Min	Max
VL	-100000	100000
ROT	0	360
A	0	100000
B	0	100000
C	0	100000
R1	0	100000
R2	0	100000

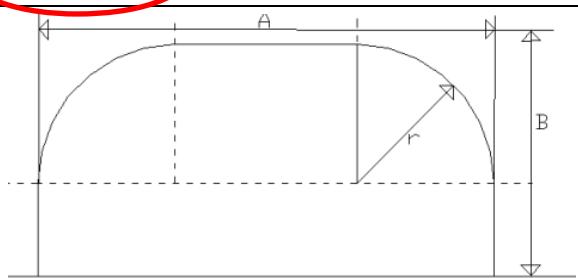
Comments: The ROT and VL parameters do not have a function for this shape.

Macro KU


Parameter Range

	Min	Max
VL	0	100000
ROT	0	359
A	0	100000
B	0	100000

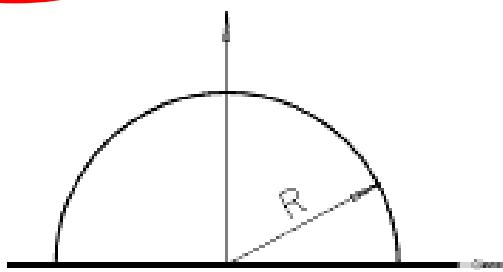
Comments: The ROT and VL parameters do not have a function for this shape.

Macro KUF


Parameter Range

	Min	Max
VL	0	100000
ROT	0	359
A	0	100000
B	0	100000
R	0	100000

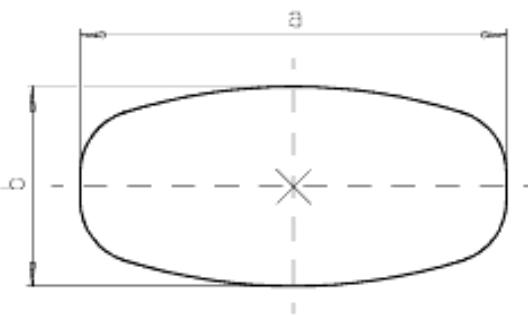
Comments: The ROT and VL parameters do not have a function for this shape.

Macro R

Parameter Range

	Min	Max
VL	0	100000
ROT	0	359
R	0	1000000

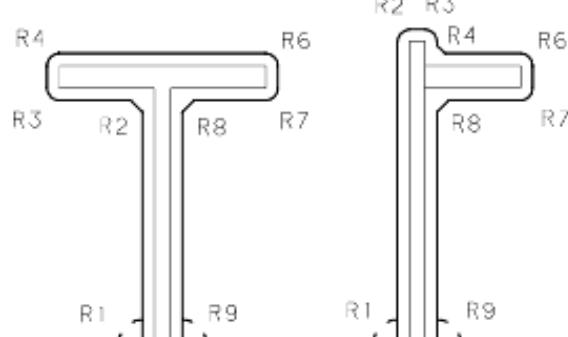
Comments: The ROT and VL parameters do not have a function for this shape.

Macro HSE

Parameter Range

	Min	Max
VL	0	100000
ROT	0	359
A	0	100000
B	0	100000
E	0	100000

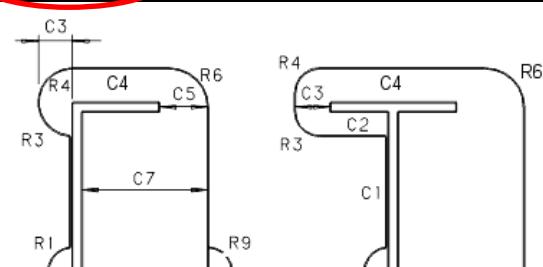
Comments:

Macro C1


Parameter Range

	Min	Max
R1	-100000	100000
R2	0	100000
R3	0	100000
R4	0	100000
R6	0	100000
R7	0	100000
R8	0	100000
R9	-100000	100000
C1	0	100000
C2	0	100000
C3	0	100000
C4	0	100000
C5	0	100000
C6	0	100000
C7	0	100000
PenProfLw	0	100000
PenProfLf	0	100000
PenProfTw	0	100000
PenProfTf	0	100000
PenProfType	0	100
MTRL_P.	0	1

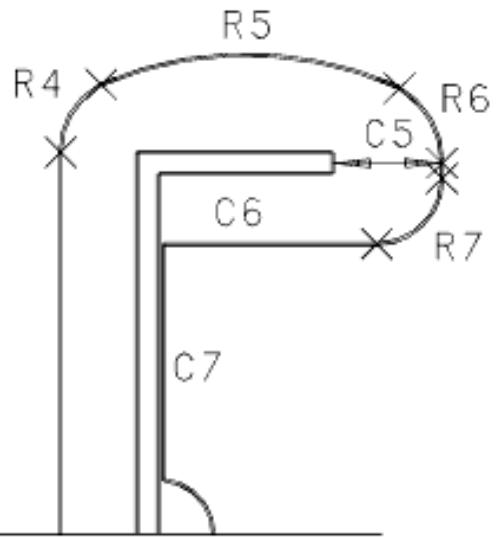
Comments:

Macro C10


Parameter Range

	Min	Max
R1	-100000	100000
R3	-100000	100000
R4	-100000	100000
R6	-100000	100000
R9	-100000	100000
C1	-100000	100000
C2	-100000	100000
C3	-100000	100000
C4	-100000	100000
C5	-100000	100000
C7	-100000	100000
PenProfLw	0	100000
PenProfLf	0	100000
PenProfTw	0	100000
PenProfTf	0	100000
PenProfType	0	100
MTRL_P.	-1	1

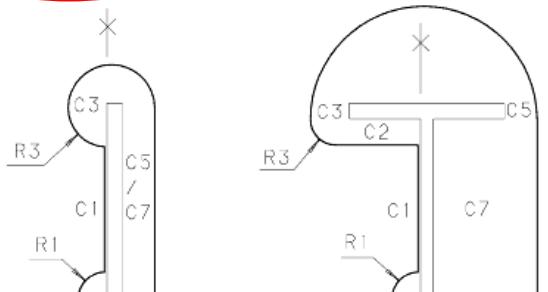
Comments:

Macro C16


Parameter Range

	Min	Max
R4	0	100000
R5	0	100000
R6	0	100000
R7	0	100000
R9	0	100000
C1	0	100000
C3	0	100000
C4	0	100000
C5	0	100000
C6	0	100000
C7	0	100000
PenProfLw	0	100000
PenProfLf	0	100000
PenProfTw	0	100000
PenProfTf	0	100000
PenProfType	0	100
MTRL_P.	-1	1

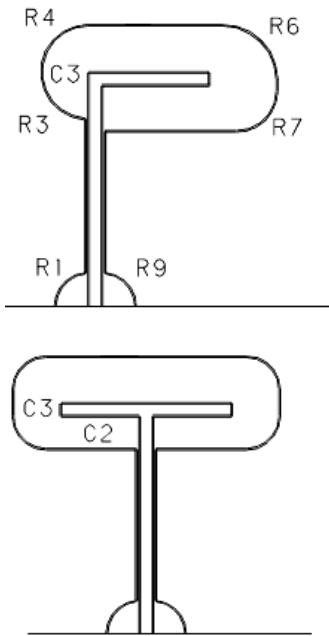
Comments:

Macro C19


Parameter Range

	Min	Max
R1	-100000	100000
R3	-100000	100000
R9	-100000	100000
C1	-10000	100000
C2	-10000	100000
C3	-10000	100000
C4	-10000	100000
C5	-10000	100000
C7	-10000	100000
PenProfLw	0	100000
PenProfLf	0	100000
PenProfTw	0	100000
PenProfTf	0	100000
PenProfType	0	100000
MTRL_P.	-1	1

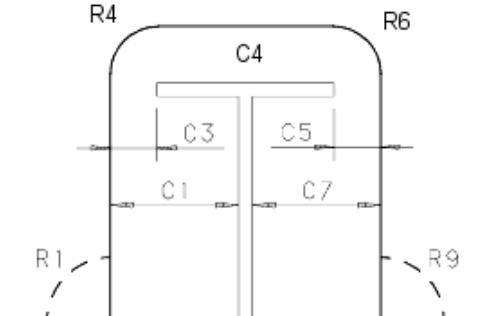
Comments:

Macro C20


Parameter Range

	Min	Max
R1	-100000	100000
R3	-100000	100000
R4	-100000	100000
R6	-100000	100000
R7	-100000	100000
R9	-100000	100000
C1	-10000	100000
C2	-10000	100000
C3	-10000	100000
C4	-10000	100000
C5	-10000	100000
C6	-10000	100000
C7	-10000	100000
PenProfLw	0	100000
PenProfLf	0	100000
PenProfTw	0	100000
PenProfTf	0	100000
PenProfType	0	100
MTRL_P.	-1	1

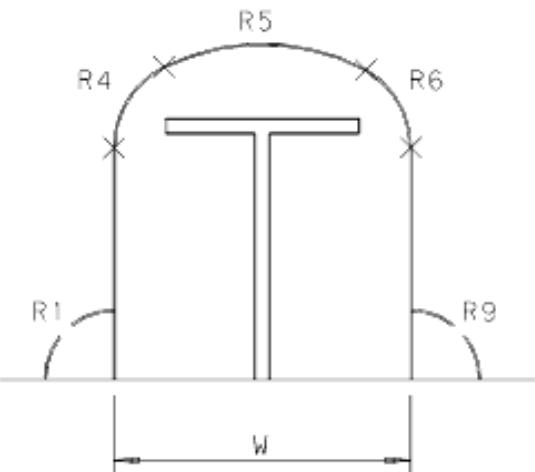
Comments:

Macro C5


Parameter Range

	Min	Max
R1	-100000	100000
R4	-100000	100000
R6	-100000	100000
R9	-100000	100000
C1	-100000	100000
C3	-100000	100000
C4	-100000	100000
C5	-100000	100000
C7	-100000	100000
PenProfLw	0	100000
PenProfLf	0	100000
PenProfTw	0	100000
PenProfTf	0	100000
PenProfType	0	100000
MTRL_P.	-1	1

Comments:

Macro C6

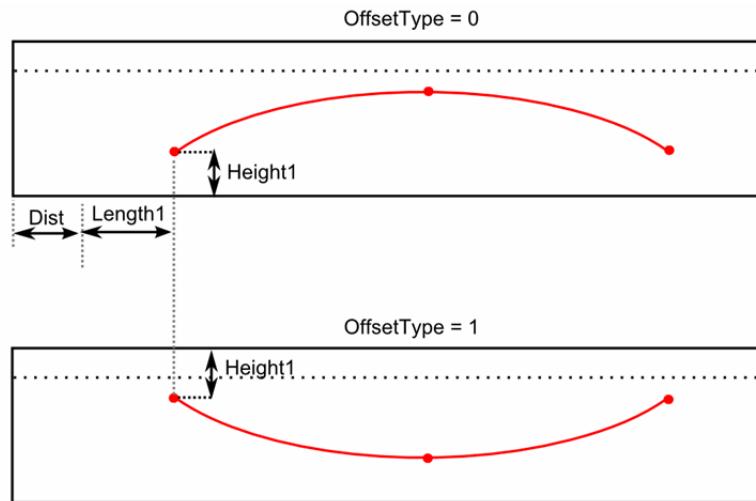
Parameter Range

	Min	Max
R1	-100000	100000
R4	-100000	100000
R5	-100000	100000
R6	-100000	100000
R9	-100000	100000
C1	-100000	100000
C3	-100000	100000
C4	-100000	100000
C5	-100000	100000
C7	-100000	100000
PenProfLw	0	100000
PenProfLf	0	100000
PenProfTw	0	100000
PenProfTf	0	100000
PenProfType	0	100
MTRL_P.	-1	1

Comments:

3 Marking macros

Bendline



	Value type		Enum type	
	Min	Max	Index	String
Printside			0 1 2 3	Machine default Front Back Both
ToolType			3 4	Ink marking Plasma marking
OffsetType	0	1		
Length1	-1	100000		
Height1	-100000	100000		
Length2	-1	100000		
Height2	-100000	100000		
....		
Length25	-1	-1		
Height25	-100000	-100000		

Comments:

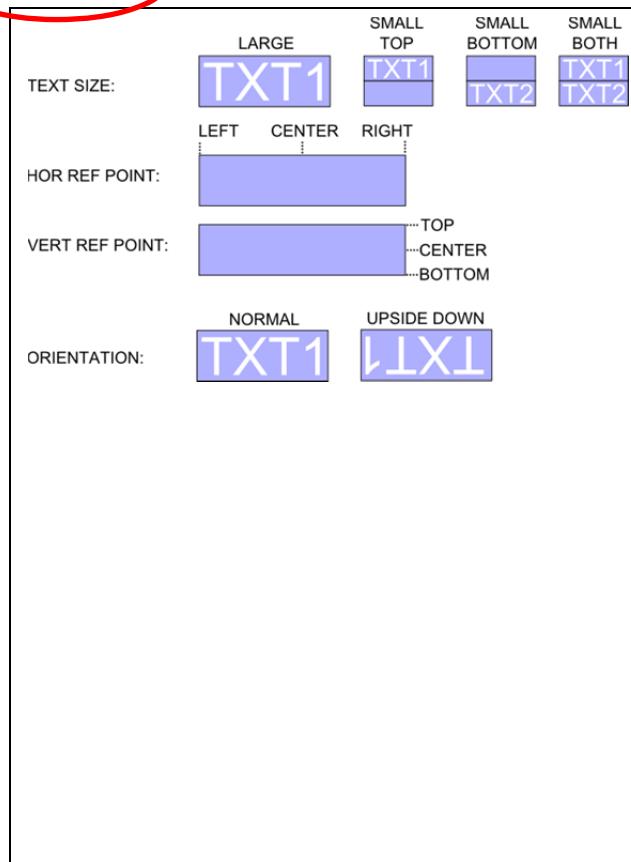
Markline

Parameter Range

	Min	Max
Printside	Mach def, Front, Back, Both	

Comments:

TEXT

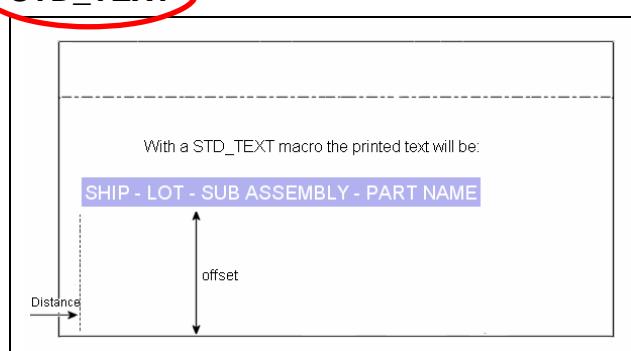


Parameter Range

	Min	Max
Vert. Pos	0	2000
Text line 1		
Text line 2		
Text size	Mach def Large Small Top Small Bottom Small Both	
Hor ref point	Mach def Left Center Right	
Vert ref point	Mach def Top Center Bottom	
Orientation	Mach def Normal Upside Down	
Char Width	Mach def Extra Wide Wide Normal Narrow Extra Narrow	

Comments:

STD_TEXT



Parameter Range

	Min	Max
offset	0	2000

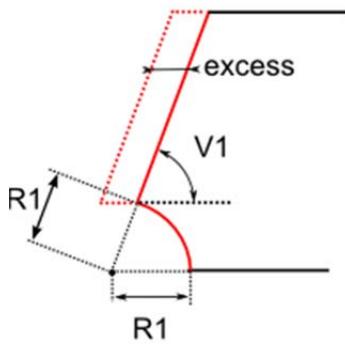
Comments:

4 Parameter definitions

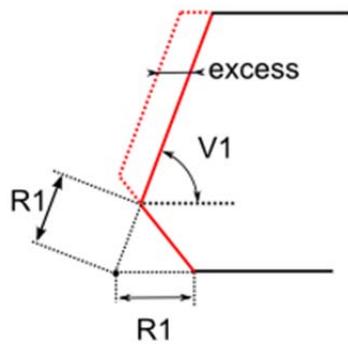
4.1 Snipe/KS

A snipe can be created by setting a radius value to a negative value.

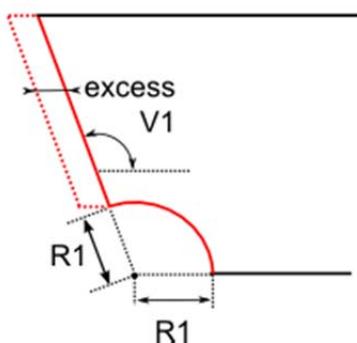
Radius ($R1>0$)



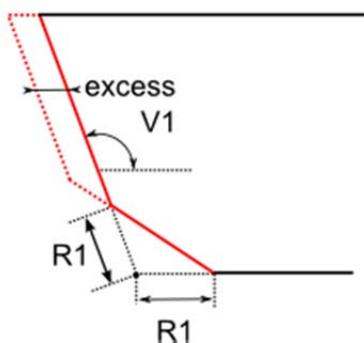
Radius ($R1<0$)



Radius ($R1>0$)

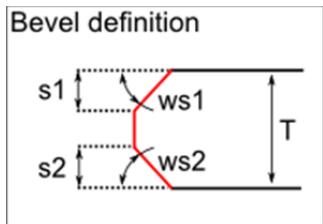


Radius ($R1<0$)



4.2 Bevel definition

The bevel is defined by the following parameters:

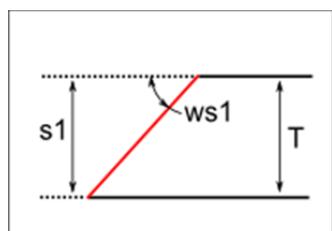


s1	nose height positive bevel
s2	nose height negative bevel
ws1	angle defining positive bevel
ws2	angle defining negative bevel
T	thickness of the material

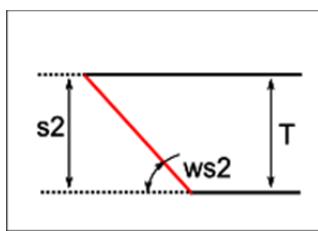
Valid ranges:

- $ws \geq 45$ $ws \leq 90$
- $s1 \geq 0$ $s1 \leq (T-s2)$
- $s2 \leq 0$ $s2 \leq (T-s1)$

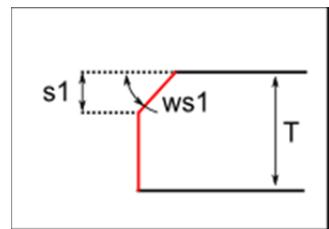
The macros will add multiple cuts to produce bevels with noses. In plasma cutting it is recommended to avoid small nose heights. Due to the heat of the cutting the nose will be melted away, and thus the result will not be satisfying enough to justify the time spent on creating the extra cuts. Therefore it is better to remove small noses to increase the machine productivity. The PCL machine has an option to remove the extra cuts when the nose height is too small.



Positive bevel ($s1 == T$)

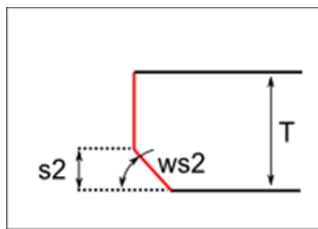


Negative bevel ($s2 == T$)



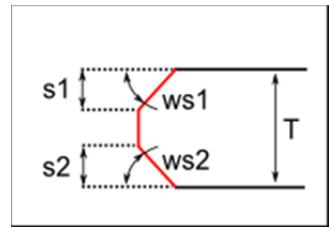
Positive bevel and nose ($s2 == 0$)

Recommended minimum values:
 $T = 10\text{mm}$, $s1 = 5\text{ mm}$



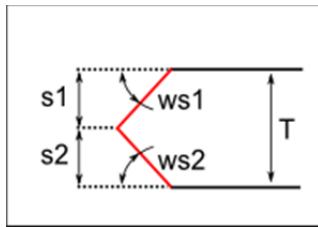
Negative bevel and nose ($s1 == 0$)

Recommended minimum values:
 $T = 10\text{mm}$, $s2 = 5\text{ mm}$



X bevel and nose

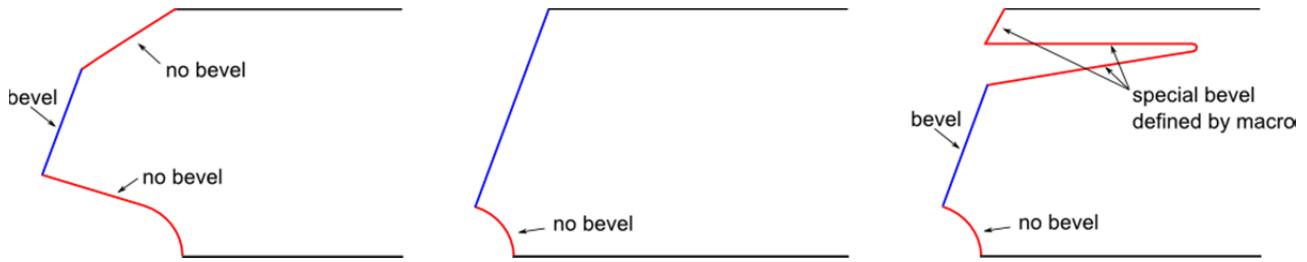
Recommended minimum values:
 $T = 15\text{mm}$, $s1 = 5\text{ mm}$, $s2 = 5\text{mm}$



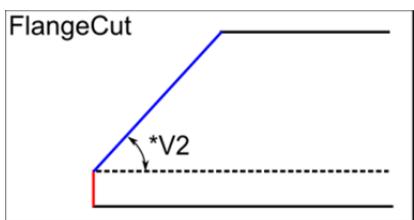
X bevel ($s1 == s2 == T/2$)

Recommended minimum values:
 $T = 10\text{mm}$, $s1 = 5\text{ mm}$, $s2 = 5\text{mm}$

The bevel is applied on the connecting side of an end cut (as shown in blue in the following examples):



For the bevel on the flange

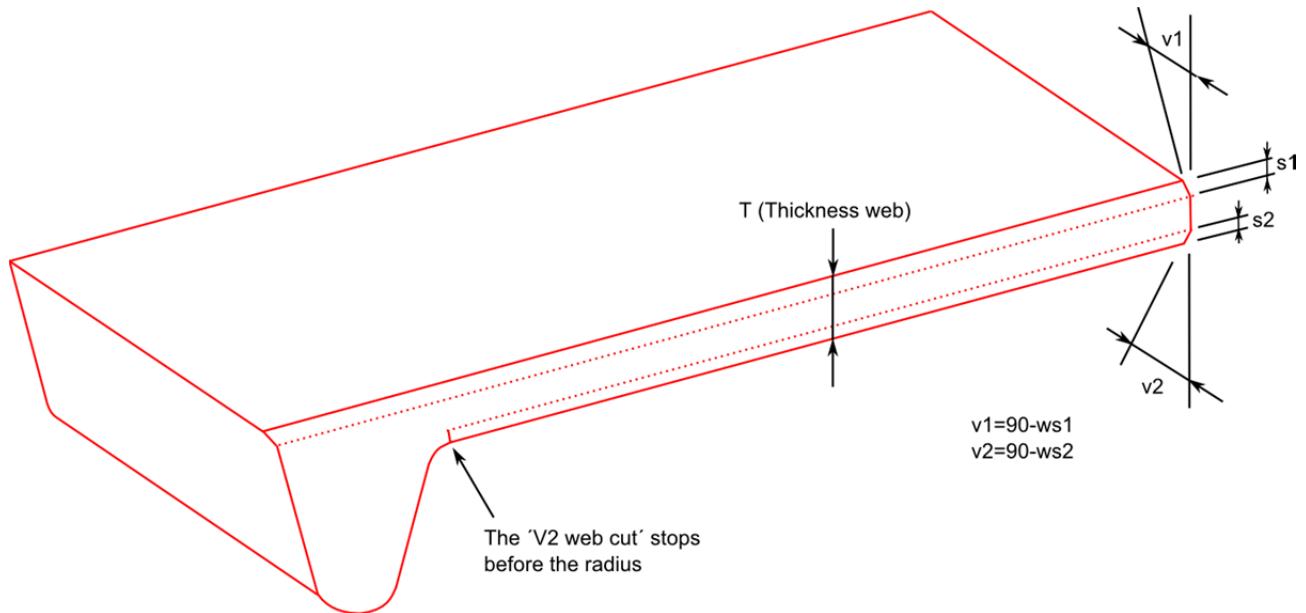


X-bevel limitations:

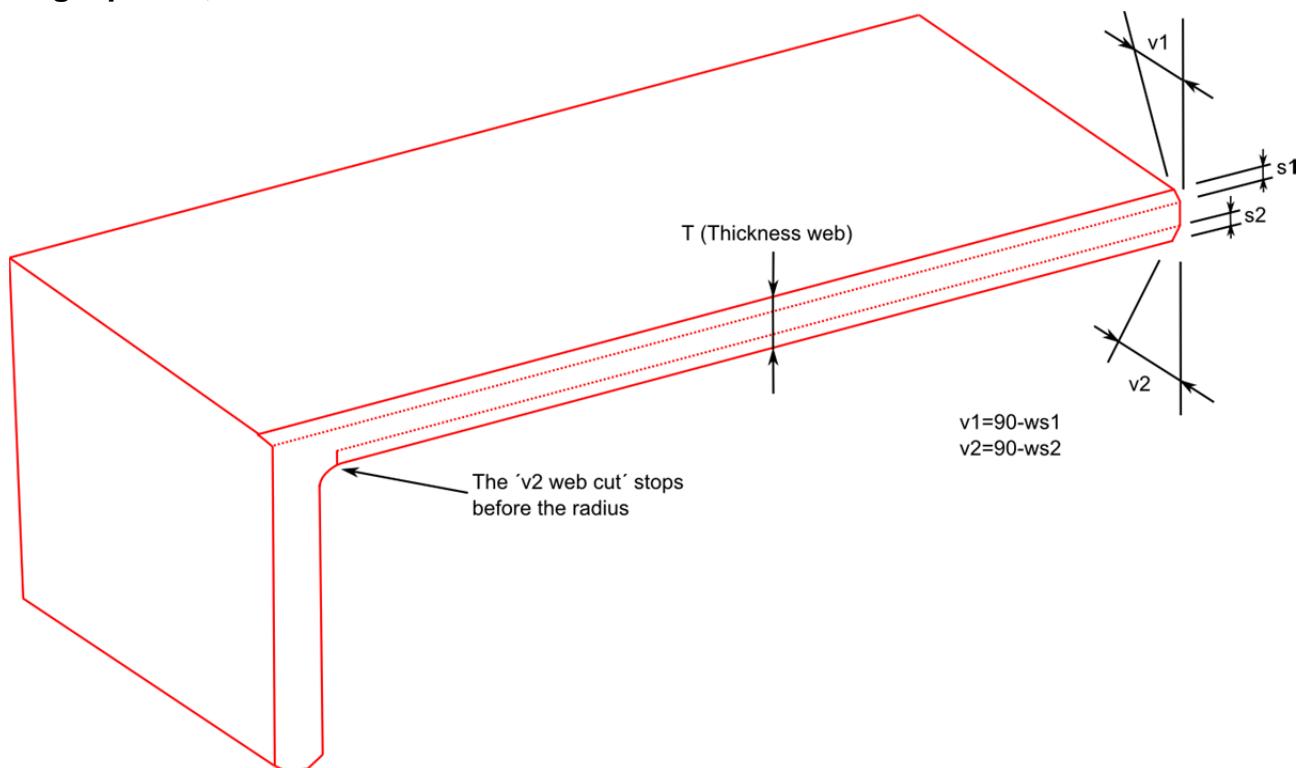
- X-bevels are only applied when V2 is 90 degrees
- X-bevels are only applied when Lf1 is 0

4.3 Bevel examples

Bulb profile, web bevel



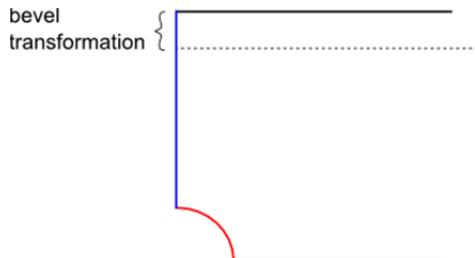
Angle profile, web bevel



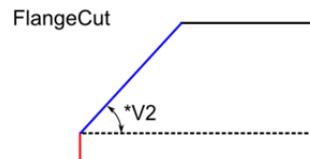
4.4 Positive bevel on bulb bar

A special bevel transition is applied on bulb in the following situation:

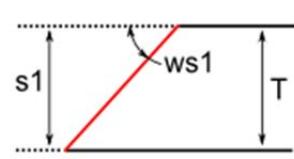
- 1) An web bevel is defined over the bulb area
- 2) No flange cut is programmed (e.g. V2 is 90 degrees)
- 3) Positive bevel without nose



Web bevel crossing bulb area



V2==90

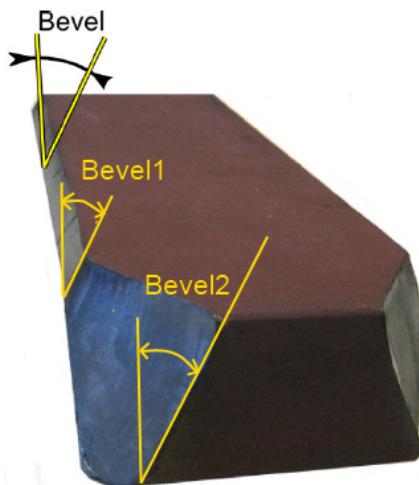


Positive bevel without nose

Bevel = the programmed bevel on the web (Bevel = 90 - ws1)

Bevel1 = settings percentage * Bevel (e.g. 80% of bevel)

Bevel2 = settings percentage * Bevel (e.g. 50% of bevel)



Settings path:

Macro Parameters => Bulb bar => Web cuts => Positive bevel

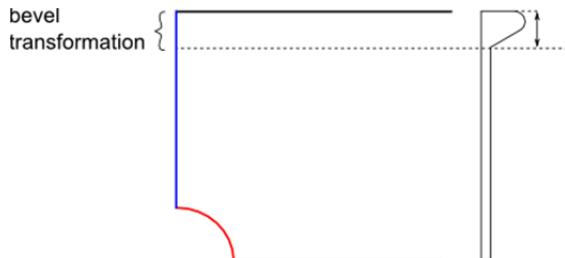
Variables

Percentage at bulb radius = 100	(bevel1)
Percentage at bulb end = 100	(bevel2)

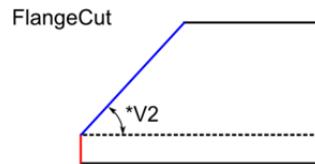
4.5 Negative bevel on bulb bar

A special bevel transition is applied on bulb in the following situation:

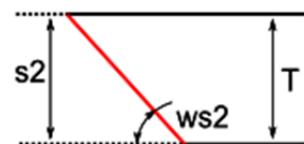
- 1) An web bevel is defined over the bulb area
- 2) No flange cut is programmed (e.g. V2 is 90 degrees)
- 3) Negative bevel without nose



Web bevel crossing bulb area

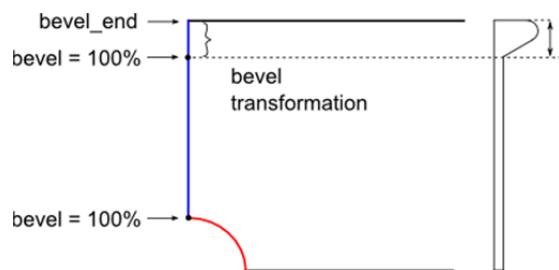


V2==90



Negative bevel without nose

A negative bevel is transformed to a bevel that can be configured (as percentage of the original bevel):



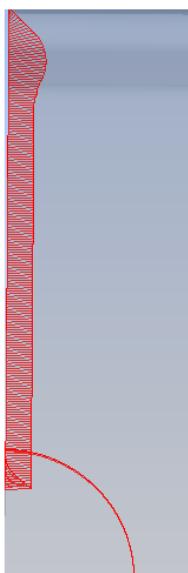
Settings path:

Macro Parameters => Bulb bar => Web cuts => Negative bevel

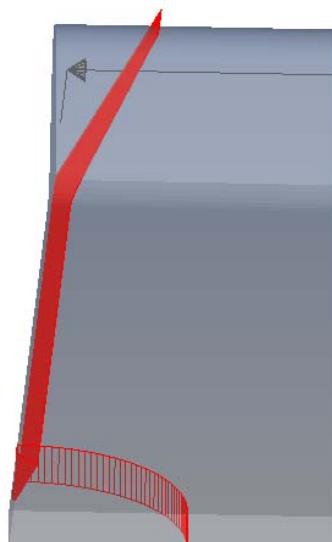
Variables

Percentage at bulb end = 100

Negative bevel on bulb, seen from the bottom of the profile
(bevel end = 0%)



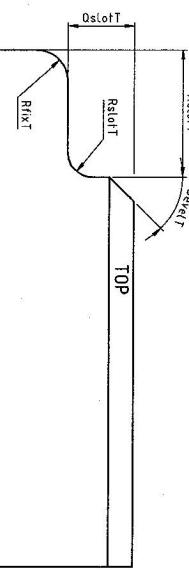
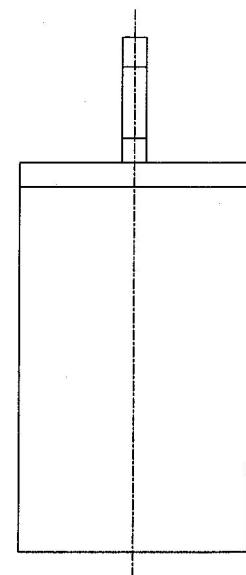
Negative bevel on bulb, seen from the bottom of the profile (bevel end = 100%)



6
5
4
3
2
1

H-beam macro FPPF

Macro parameters



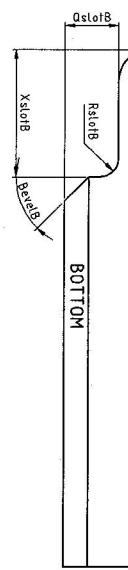
Web View

4

C

C
D

Top View

B
A

Bottom View

B

REVISION HISTORY			
REV	DATE	DESCRIPTION	APPROVED
0	-	-	PvO



HGG
 HEG PROFORMING EQUIPMENT B.V.
 ZONALAK 2
 1771 ZV WEMMENHOEF
 Tel.: +31 41 227 59 44-39
 Fax: +31 41 227 59 49
 E-mail: Wemmenhof@

SURFACE TEXTURE
 K-CONFORM, REF-B-50, DIN-EN-1090-2
 DIMENSIONS & TOLERANCES
 ACCORDING: EN-1090-2/2004
 GEOMETRICAL TOLERANCES
 ACCORDING: EN-1090-2/2004

BY HEG PROFORMING EQUIPMENT B.V.

Order number: -

QUANTITY: -
 Scale: -
 Description: -
 Project ref.: A3
 Drawing number: FPPF
 Date: 18-10-2010
 Drawn by: /
 Checked by: /
 Approved by: /

Specimen:	Size:	Date:	Drawn by:	Rev:	Sheet:
H-beam	A3	18-10-2010	FPPF	0	/

6

5

4

3

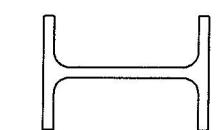
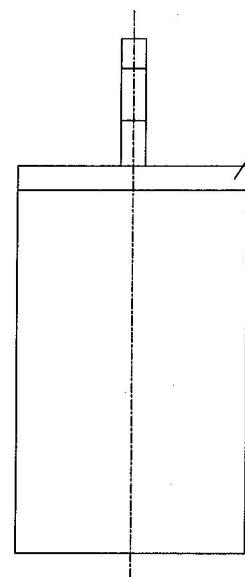
2

1

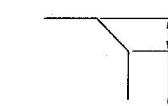
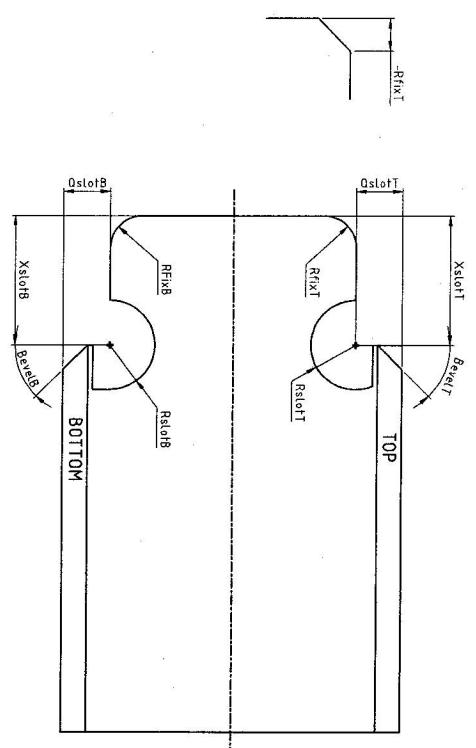
Check bevel details ref. 80-F-61

H-beam macro FFFF

Macro parameters

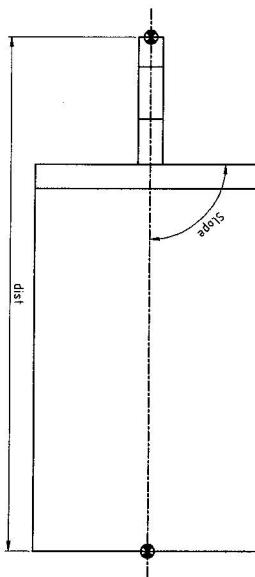


Web View



Top View

Bottom View



dist

Slope

RfixB

RslotB

BevelB

NoseB

Slope

XslotT
QslotT
RslotT
RfixT
QsquareT
BevelT
BeveliT
NoseT
XslotB
QsquareB
QslotB
RslotB
RfixB
XslotB
BevelB
BeveliT
NoseB

Slope

dist

RfixB

QslotT

BevelT

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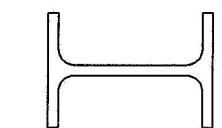
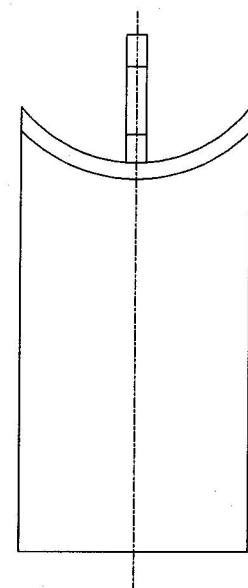
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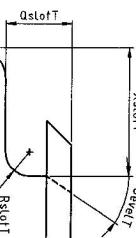
H-beam macro RPPF



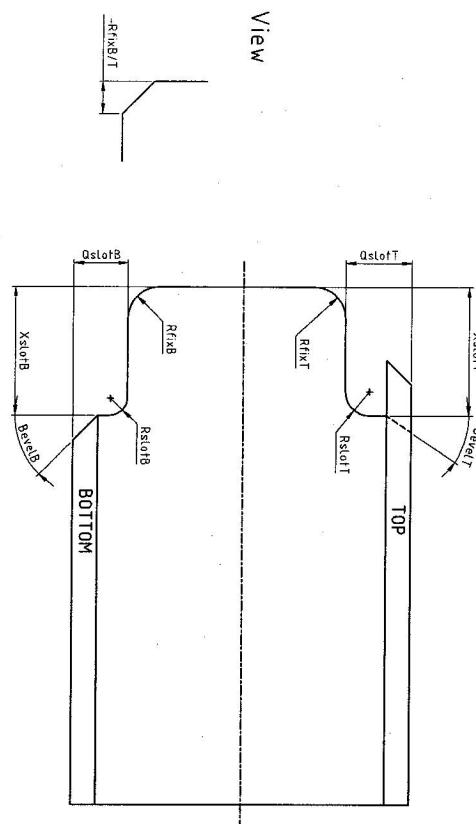
Macro parameters



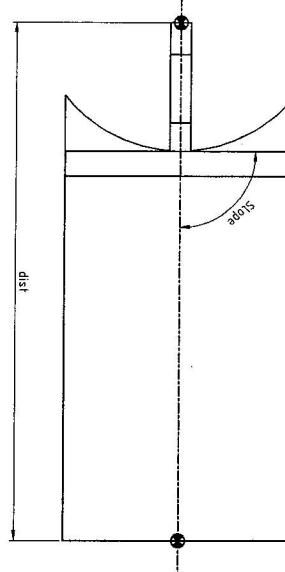
Top View
Side View



TOP



TOP



Bottom View

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D

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\\\Hgg-fs\projecten\1256 Kiewit RPC1200\A3!_Scope\H-Macro\Macro's\RPPF.dwg, 4-7-2011 14:34:57, DWG ePdft.pc3

		REVISION HISTORY	
REV	DATE	DESCRIPTION	APPROVED
HGG			
LOCATION: HGG PIPING EQUIPMENT B.V. ZODIAK 2 1771 SW WERENBERG TEL: +31 (0) 227 59 44 36 FAX: +31 (0) 227 59 44 63 E-mail: info@hgg.nl		POST ADDRESS: HGG PIPING EQUIPMENT B.V. PARK 44 1775 ZW WERENBERG	
SURFACE TEXTURE ACCORDING HB-DG DRAWING		GEOMETRICAL TOLERANCES ACCORDING HB-DG DRAWING	BY HGG PIPING EQUIPMENT B.V.
Client:	-	Geometries:	-
Scale:	-	Geometries:	-
Project:	A4	Drawing number:	
Date:	P-0	Date:	
Check:	-	Date:	
H-Beam Macro RPPF		RPPF	Rev: / Sheet: 1

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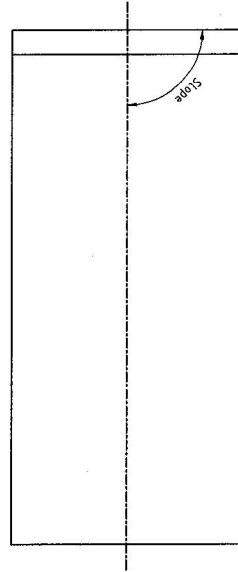
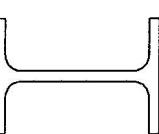
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H-beam macro FAN

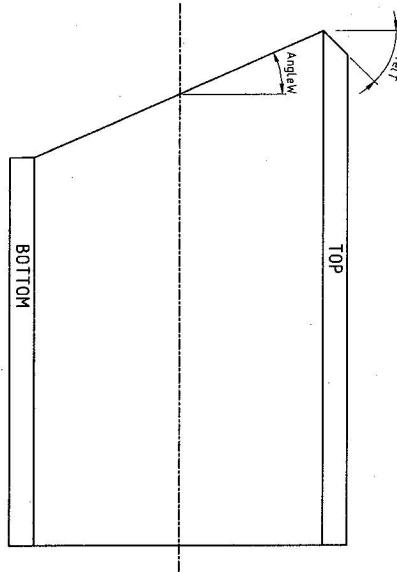
Macro parameters

Top View

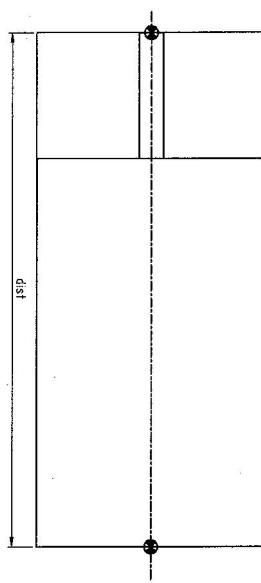



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Web View



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Bottom View

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		REVISION HISTORY	
REV.	DATE	DESCRIPTION	APPROVED
0	-	-	P=0



LOCATION:
HGG PRINTING EQUIPMENT B.V.
ZONALE 2
1771 SW NEMERIKERP
TEL: +31 (0) 227 98 49 39
FAX: +31 (0) 227 98 19 83
E-mail: info@hgge.nl

POST ADDRESS:

HGG PRINTING EQUIPMENT B.V.

FACTORY 46

1775 ZW NEMERIKER

ALL MENTS RESERVED

BY HGG PRINTING EQUIPMENT B.V.

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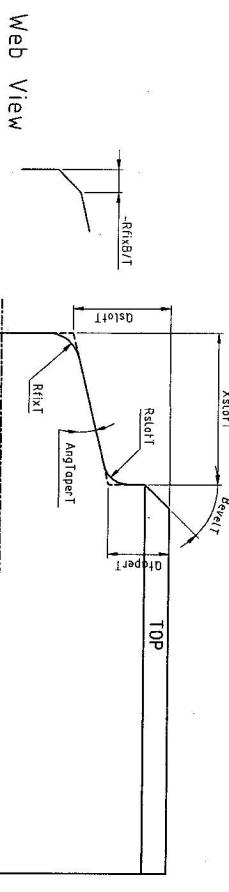
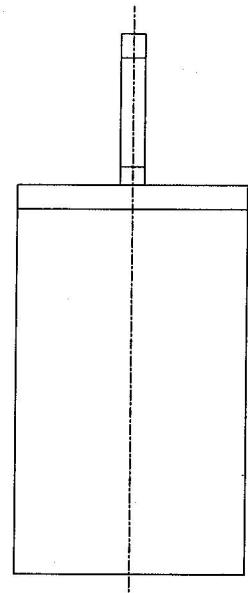
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H-beam macro FTTF

Macro parameters



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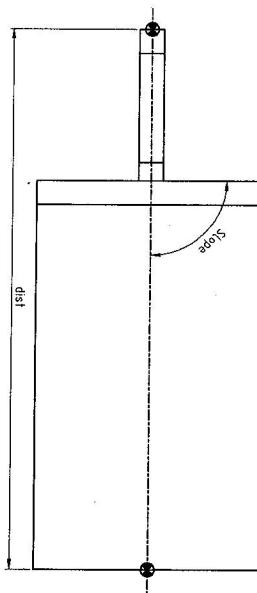
D

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Top View

Bottom View



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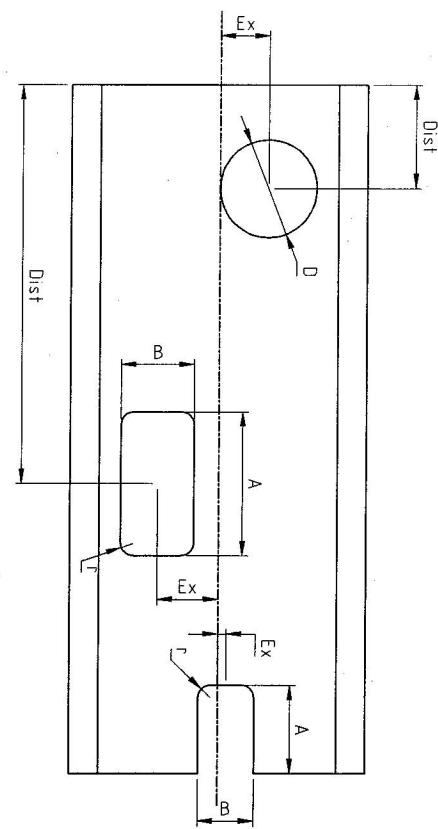
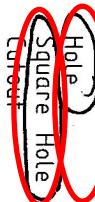
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H-beam Web Intermediate macro's

Supported Intermediate Macro's

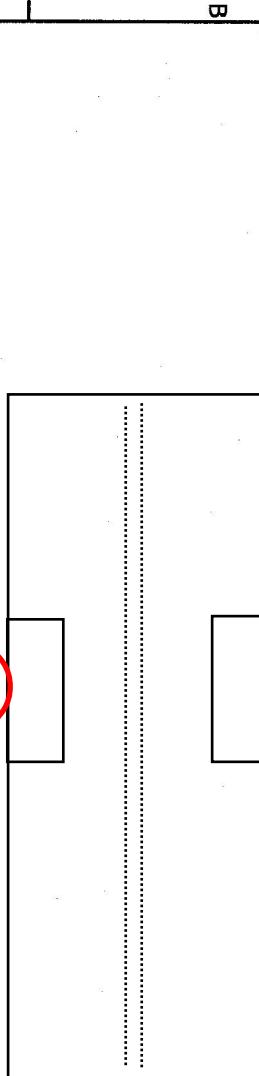


Macro position parameters

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Intermediate macro bevel limitations

Bevel = 0



Cutout

REV		DATE		DESCRIPTION		APPROVED
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HGC		HGC PIPING EQUIPMENT B.V.		HGC PIPING EQUIPMENT B.V.	
ZUIDLAAN 2		ZUIDLAAN 2		ZUIDLAAN 2	
1771 SW WEMMENHOEF		1771 SW WEMMENHOEF		1771 SW WEMMENHOEF	
TEL: +31 10 227 59 49 30		TEL: +31 10 227 59 49 30		TEL: +31 10 227 59 49 30	
Fax: +31 10 227 59 49 32		Fax: +31 10 227 59 49 32		Fax: +31 10 227 59 49 32	
E-mail: info@hgc.nl		E-mail: info@hgc.nl		E-mail: info@hgc.nl	
SURFACE TEXTURE		DIMENSIONS & TOLERANCES		GEOMETRICAL TOLERANCES	
ACCORDING HEB-BRD DRAWING		ACCORDING HEB-BRD DRAWING		ACCORDING HEB-BRD DRAWING	
Other:		Other:		Other:	
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Unit:	Pt:0	18-10-2010	Drawing number:	Int-02	Rev:
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