

Rorty De Dion Axle Assembly

It is well established that the De Dion axle can offer benefits over both live axle and IRS suspension setups.

This De Dion design breaks no new ground, but is devised specifically for the Lotus Seven style "Locost" sports car as detailed in Ron Champion's book "Build Your Own Sports Car For As Little As £250 – And Race It!"

No warranty is given or implied as to the design's suitability for any purpose. It is as yet unproven in a Locost, but is freely offered for educational and comparative purposes.

Anyone building and driving a car based on this design does so entirely at their own risk.

Due to their propensity to sue anything with a pulse, Americans are explicitly requested not to attempt to construct this assembly either in part or in whole.

I absolve myself from any liability whatsoever.

Bob Frost-Stevenson

info@rorty-design.com

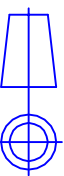
www.rorty-design.com

De Dion Axle Assembly Description

No.	Item
1	De Dion tube.
2	Hub plate.
3	Calliper bracket.
4	Ford Sierra rear hub.
5	Hex bolt, M10 x 30 and Ø10mm flat washer.
6	Hub bucket.
7	Axle bracket.
8	Shock bracket.
9	Panhard mount – axle, and 1/2"-20 UNF Nyloc nut.
10	1/2"-20 UNF RH rod end.
11	Safety washer.
12	Panhard tube.
13	Panhard tube ferule.
14	1/2"-20 UNF LH jam nut.
15	1/2"-20 UNF LH rod end.
16	Ø13mm spacer.
17	Hex bolt and Nyloc nut 1/2"-13 UNC and Ø1/2" flat washer.
18	Panhard mount – chassis.
19	Ford Sierra rear disc.

A3

FIRST ANGLE PROJECTION



THIS DRAWING IS CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT SHALL NOT BE LOANED, COPIED OR DISCLOSED TO ANY OTHER PERSON NOR USED FOR ANY OTHER PURPOSE WITHOUT THE WRITTEN CONSENT OF RORTY DESIGN

- UNLESS SPECIFIED OTHERWISE:
- 1. ALL DIMENSIONS ARE IN MILLIMETERS
 - 2. REMOVE ALL BURRS & SHARP EDGES
 - 3. CORNER RADII R0.75
 - 4. CHAMFER SIZE 0.75 x 45°
 - 5. CONCENTRICITY 0.05 TIR

UNLESS SPECIFIED OTHERWISE: TOLERANCES ANGULAR ± 0.5°

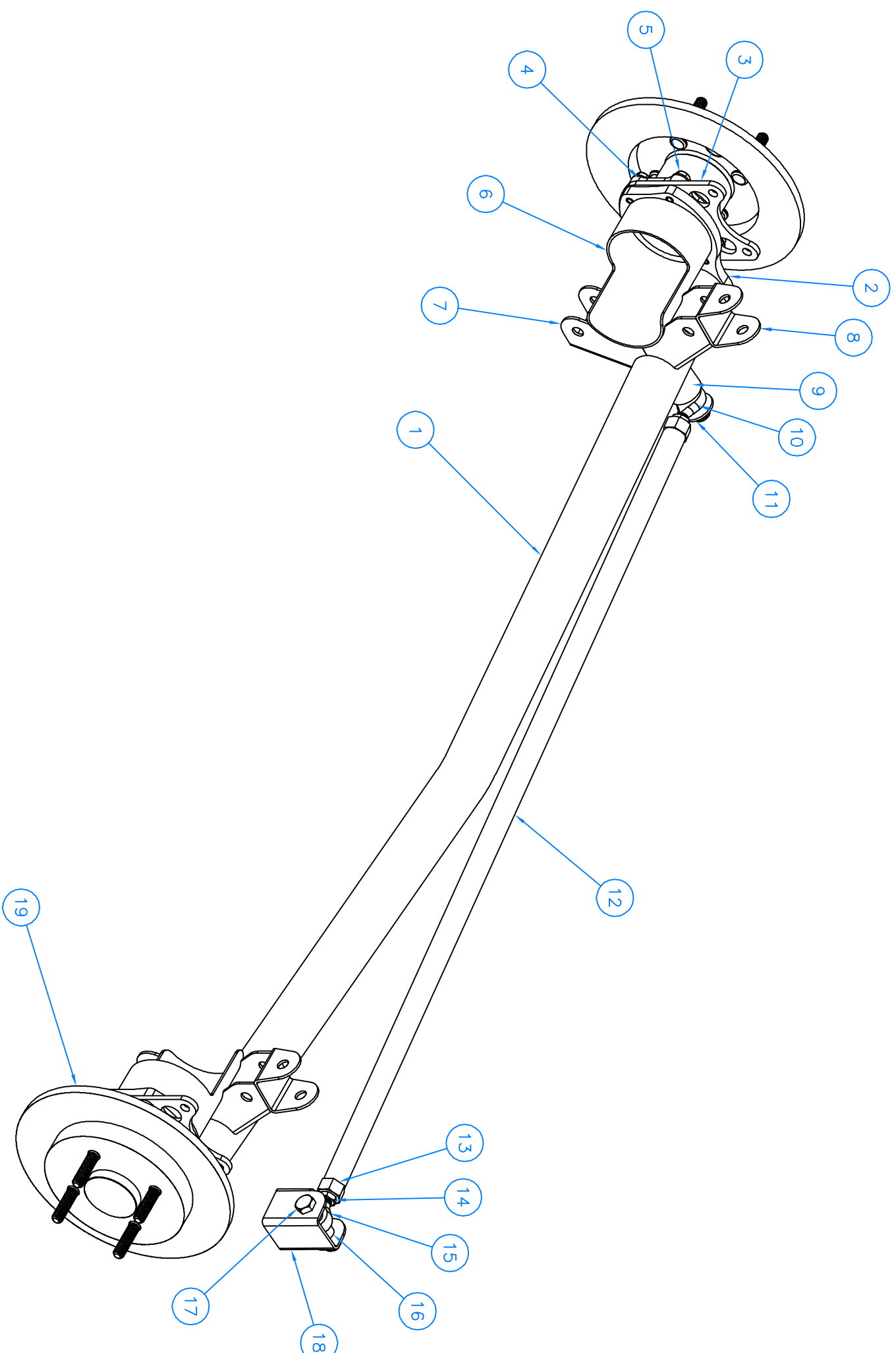
.X ± 0.5
.XX ± 0.25
.XXX ± 0.125



RORTY DESIGN
 PO BOX 13270
 LAW COURTS
 MELBOURNE
 VIC 8010
 AUSTRALIA

info@rorty-design.com
 www.rorty-design.com

REV No.	DATE & No	REVISIONS	ZONE

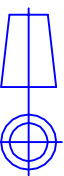


SCALE	5:1	SHEET	
DRAWN		DATE	23.12.04
TITLE	DE DION ASSEMBLY		

DRG No RDDDA01

A3

FIRST ANGLE PROJECTION



THIS DRAWING IS CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT SHALL NOT BE LOANED, COPIED OR DISCLOSED TO ANY OTHER PERSON NOR USED FOR ANY OTHER PURPOSE WITHOUT THE WRITTEN CONSENT OF RORTY DESIGN

- UNLESS SPECIFIED OTHERWISE:
1. ALL DIMENSIONS ARE IN MILLIMETERS
 2. REMOVE ALL BURRS & SHARP EDGES
 3. CORNER RADII R0.75
 4. CHAMFER SIZE 0.75 x 45°
 5. CONCENTRICITY 0.05 TIR

UNLESS SPECIFIED OTHERWISE: TOLERANCES ANGULAR ± 0.5°

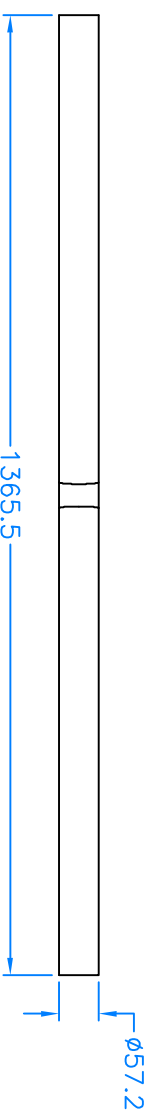
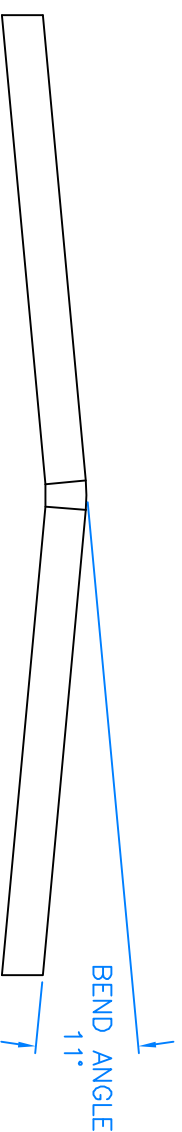
.X ± 0.5
.XX ± 0.25
.XXX ± 0.125



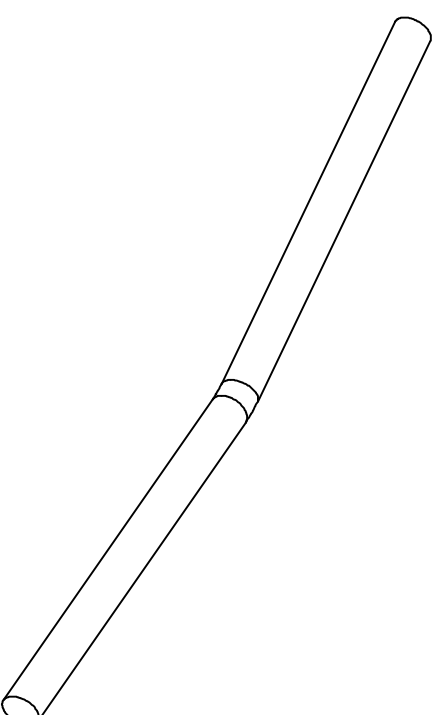
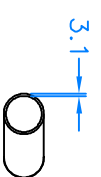
RORTY DESIGN
 PO BOX 13270
 LAW COURTS
 MELBOURNE
 VIC 8010
 AUSTRALIA

info@rorty-design.com
 www.rorty-design.com

REVISIONS		
REV No.	DATE & No	ZONE



MATERIAL: ø57.2 X 3.01 CDS [DOM]

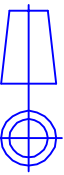


SCALE	10:1	SHEET	
DRAWN		DATE	23.12.04
TITLE	DE DION TUBE		

DRG No RDDDA02

A3

FIRST ANGLE PROJECTION



THIS DRAWING IS CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT SHALL NOT BE LOANED, COPIED OR DISCLOSED TO ANY OTHER PERSON NOR USED FOR ANY OTHER PURPOSE WITHOUT THE WRITTEN CONSENT OF RORTY DESIGN

- UNLESS SPECIFIED OTHERWISE:
1. ALL DIMENSIONS ARE IN MILLIMETERS
 2. REMOVE ALL BURRS & SHARP EDGES
 3. CORNER RADII R0.75
 4. CHAMFER SIZE 0.75 x 45°
 5. CONCENTRICITY 0.05 TIR

UNLESS SPECIFIED OTHERWISE: TOLERANCES ANGULAR ± 0.5°

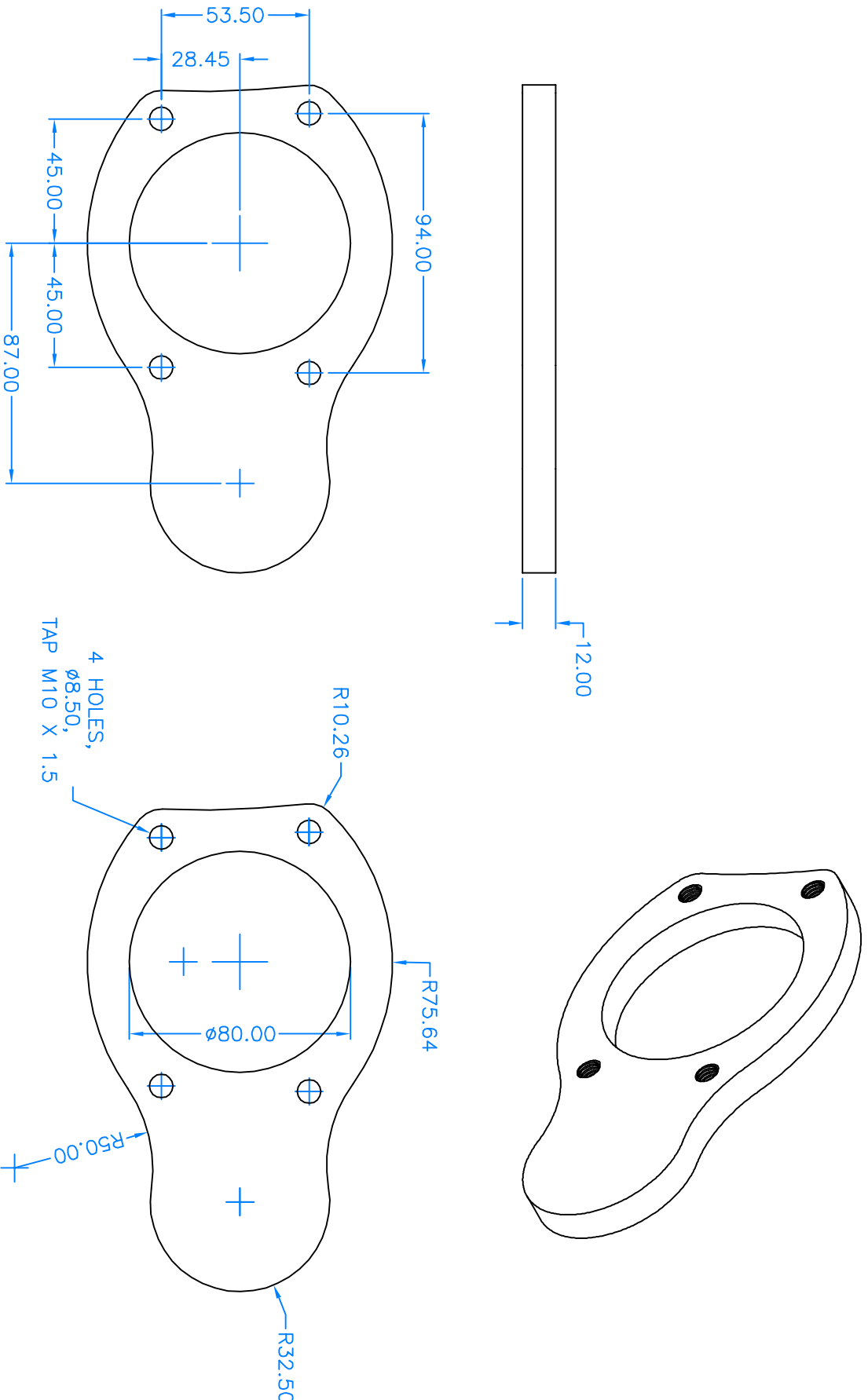
.X ± 0.5
.XX ± 0.25
.XXX ± 0.125



RORTY DESIGN
 PO BOX 13270
 LAW COURTS
 MELBOURNE
 VIC 8010
 AUSTRALIA

info@rorty-design.com
 www.rorty-design.com

REV No.	REVISIONS	
	DATE & No	ZONE



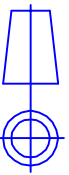
NOTE: BOLT HOLES ARE NOT SYMETRICAL

SCALE	SHEET
2:1	
DRAWN	DATE
	23.12.04
TITLE	
HUB PLATE	

DRG No RDDDA03

A3

FIRST ANGLE PROJECTION



THIS DRAWING IS CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT SHALL NOT BE LOANED, COPIED OR DISCLOSED TO ANY OTHER PERSON NOR USED FOR ANY OTHER PURPOSE WITHOUT THE WRITTEN CONSENT OF RORTY DESIGN

- UNLESS SPECIFIED OTHERWISE:
1. ALL DIMENSIONS ARE IN MILLIMETERS
 2. REMOVE ALL BURRS & SHARP EDGES
 3. CORNER RADII R0.75
 4. CHAMFER SIZE 0.75 x 45°
 5. CONCENTRICITY 0.05 TIR

UNLESS SPECIFIED OTHERWISE: TOLERANCES ANGULAR ± 0.5°

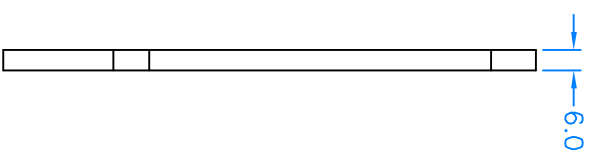
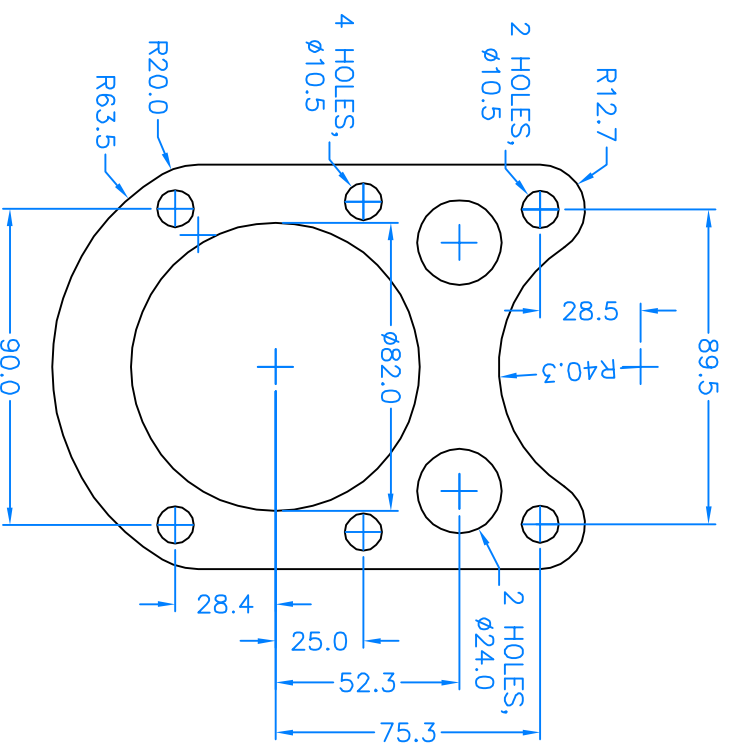
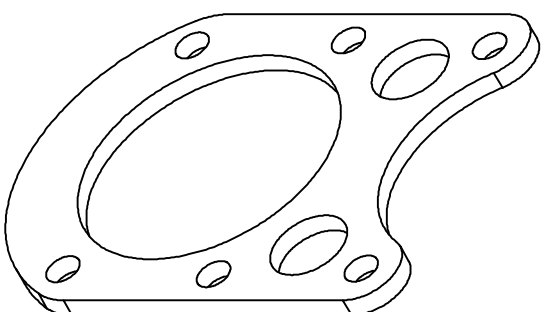
.X ± 0.5
.XX ± 0.25
.XXX ± 0.125



RORTY DESIGN
 PO BOX 13270
 LAW COURTS
 MELBOURNE
 VIC 8010
 AUSTRALIA

info@rorty-design.com
 www.rorty-design.com

REV No.	REVISIONS	
	DATE & No	ZONE



MATERIAL: 6mm COLD ROLLED PLATE

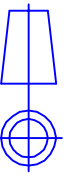
SCALE	SHEET
2:1	
DRAWN	DATE
	23.12.04
TITLE	

CALLIPER BRACKET

DRG No RDDDA04

A3

FIRST ANGLE PROJECTION



THIS DRAWING IS CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT SHALL NOT BE LOANED, COPIED OR DISCLOSED TO ANY OTHER PERSON NOR USED FOR ANY OTHER PURPOSE WITHOUT THE WRITTEN CONSENT OF RORTY DESIGN

- UNLESS SPECIFIED OTHERWISE:
1. ALL DIMENSIONS ARE IN MILLIMETERS
 2. REMOVE ALL BURRS & SHARP EDGES
 3. CORNER RADII R0.75
 4. CHAMFER SIZE 0.75 x 45°
 5. CONCENTRICITY 0.05 TIR

UNLESS SPECIFIED OTHERWISE: TOLERANCES ANGULAR ± 0.5°

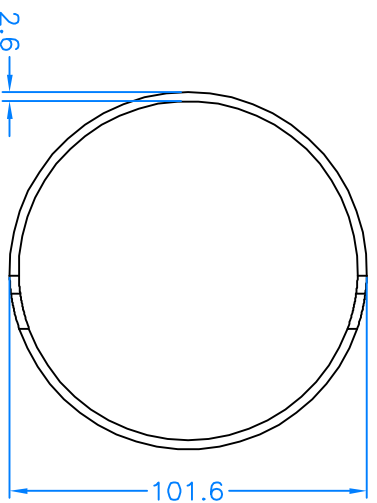
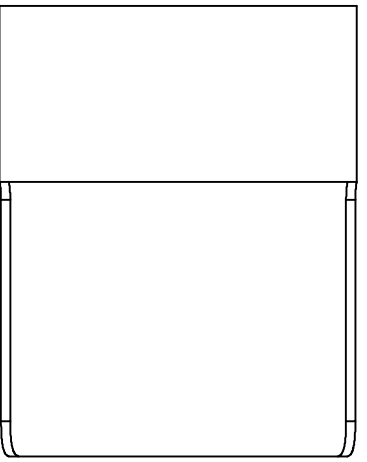
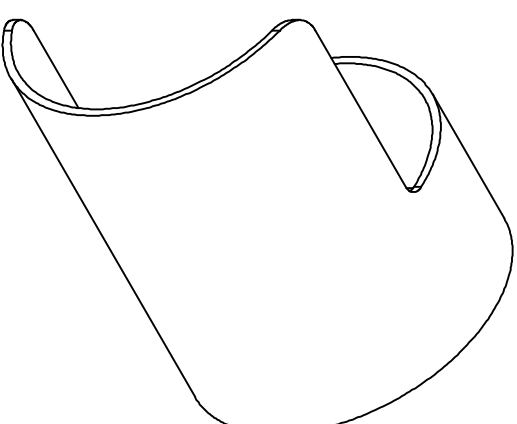
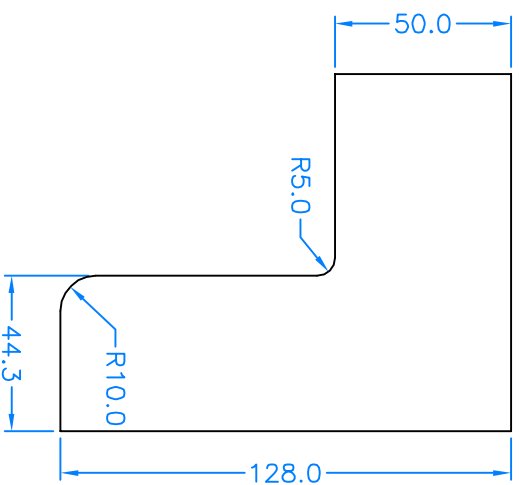
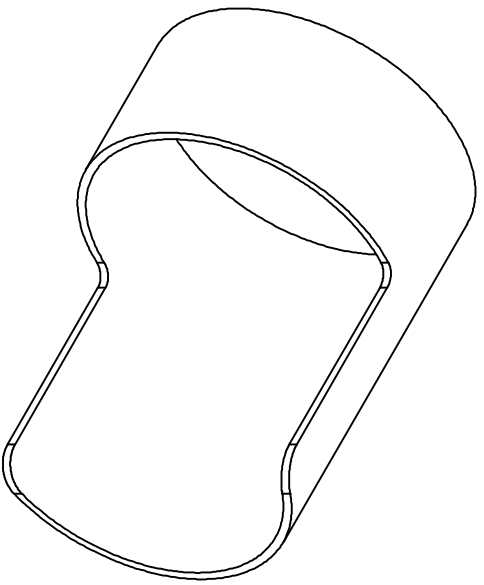
.X ± 0.5
.XX ± 0.25
.XXX ± 0.125



RORTY DESIGN
 PO BOX 13270
 LAW COURTS
 MELBOURNE
 VIC 8010
 AUSTRALIA

info@rorty-design.com
 www.rorty-design.com

REVISIONS		
REV No.	DATE & No	ZONE



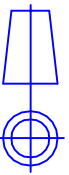
MATERIAL: ø101.6 X 2.6 ERW/CDS [CREW/DOM]

SCALE	SHEET
2:1	
DRAWN	DATE
	23.12.04
TITLE	
HUB BUCKET	

DRG No RDDDA05

A3

FIRST ANGLE PROJECTION



THIS DRAWING IS CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT SHALL NOT BE LOANED, COPIED OR DISCLOSED TO ANY OTHER PERSON NOR USED FOR ANY OTHER PURPOSE WITHOUT THE WRITTEN CONSENT OF RORTY DESIGN

- UNLESS SPECIFIED OTHERWISE:
- 1. ALL DIMENSIONS ARE IN MILLIMETERS
 - 2. REMOVE ALL BURRS & SHARP EDGES
 - 3. CORNER RADII R0.75
 - 4. CHAMFER SIZE 0.75 x 45°
 - 5. CONCENTRICITY 0.05 TIR

UNLESS SPECIFIED OTHERWISE: TOLERANCES ANGULAR ± 0.5°

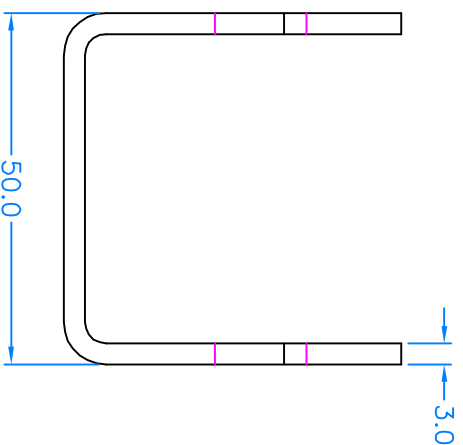
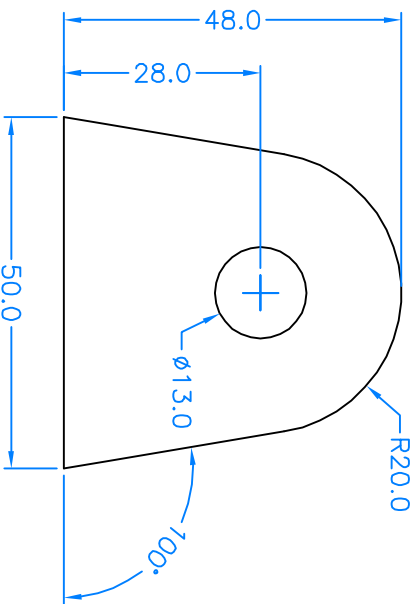
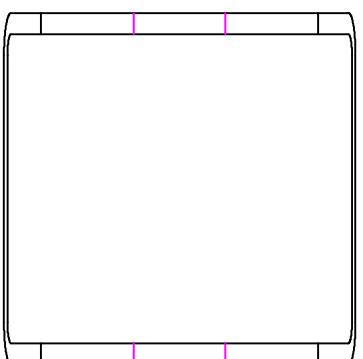
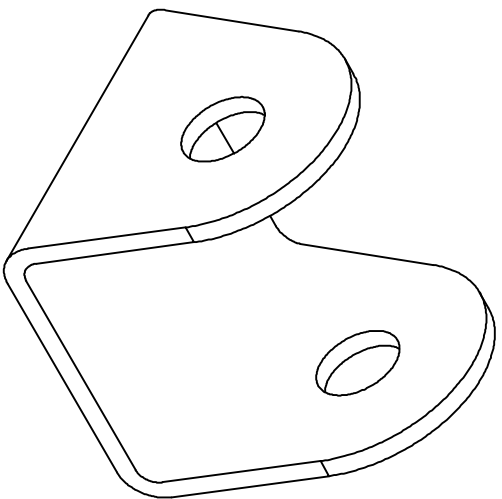
.X ± 0.5
.XX ± 0.25
.XXX ± 0.125



RORTY DESIGN
 PO BOX 13270
 LAW COURTS
 MELBOURNE
 VIC 8010
 AUSTRALIA

info@rorty-design.com
 www.rorty-design.com

REV No.	REVISIONS	
	DATE & No	ZONE



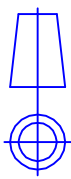
MATERIAL: 100 X 50 X 3 RHS

SCALE	1:1	SHEET	
DRAWN		DATE	23.12.04
TITLE	SHOCK BRACKET		

DRG No RDDDA07

A3

FIRST ANGLE PROJECTION



THIS DRAWING IS CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT SHALL NOT BE LOANED, COPIED OR DISCLOSED TO ANY OTHER PERSON NOR USED FOR ANY OTHER PURPOSE WITHOUT THE WRITTEN CONSENT OF RORTY DESIGN

- UNLESS SPECIFIED OTHERWISE:
1. ALL DIMENSIONS ARE IN MILLIMETERS
 2. REMOVE ALL BURRS & SHARP EDGES
 3. CORNER RADII R0.75
 4. CHAMFER SIZE 0.75 x 45°
 5. CONCENTRICITY 0.05 TIR

UNLESS SPECIFIED OTHERWISE: TOLERANCES ANGULAR ± 0.5°

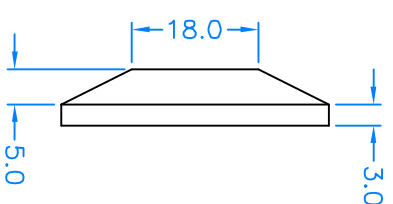
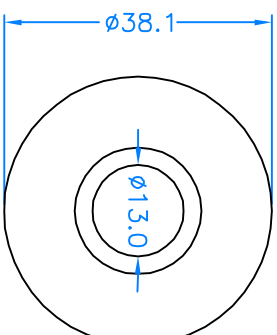
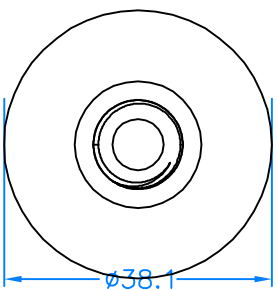
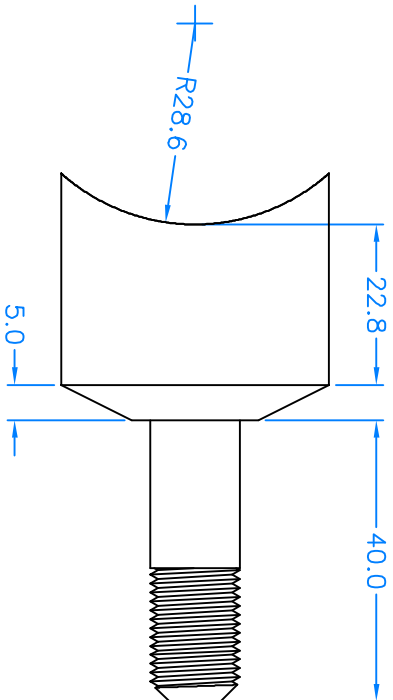
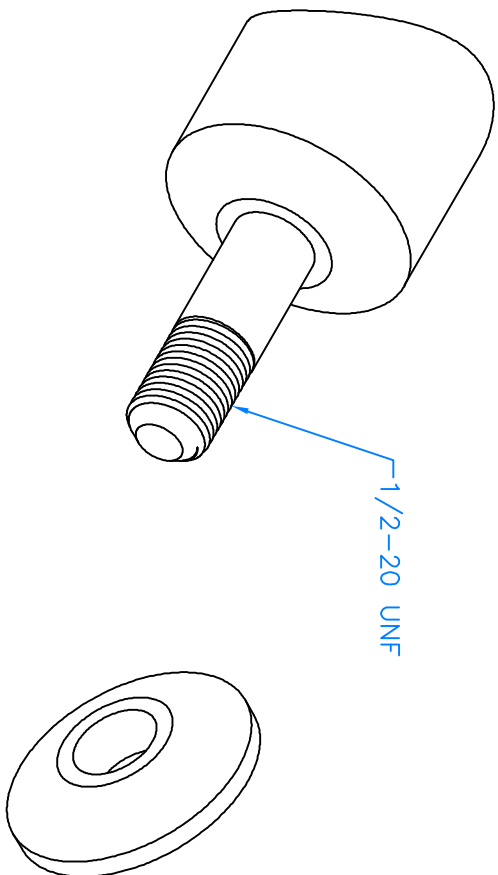
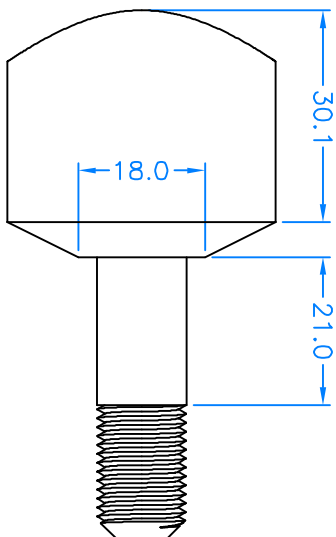
.X ± 0.5
.XX ± 0.25
.XXX ± 0.125



RORTY DESIGN
 PO BOX 13270
 LAW COURTS
 MELBOURNE
 VIC 8010
 AUSTRALIA

info@rorty-design.com
 www.rorty-design.com

REV No.	REVISIONS	
	DATE & No	ZONE



MATERIAL: ϕ 38.1 4140 [EN24T] ROUND BAR

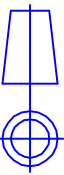
SCALE	SHEET
1:1	
DRAWN	DATE
	23.12.04
TITLE	

PANHARD MOUNT - AXLE

DRG No RDDDA08

A3

FIRST ANGLE PROJECTION



THIS DRAWING IS CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT SHALL NOT BE LOANED, COPIED OR DISCLOSED TO ANY OTHER PERSON NOR USED FOR ANY OTHER PURPOSE WITHOUT THE WRITTEN CONSENT OF RORTY DESIGN

- UNLESS SPECIFIED OTHERWISE:
- 1. ALL DIMENSIONS ARE IN MILLIMETERS
 - 2. REMOVE ALL BURRS & SHARP EDGES
 - 3. CORNER RADII R0.75
 - 4. CHAMFER SIZE 0.75 x 45°
 - 5. CONCENTRICITY 0.05 TIR

UNLESS SPECIFIED OTHERWISE: TOLERANCES ANGULAR ± 0.5°

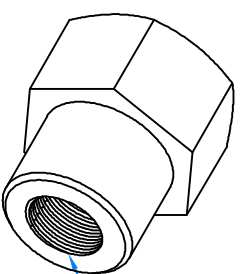
.X ± 0.5
.XX ± 0.25
.XXX ± 0.125



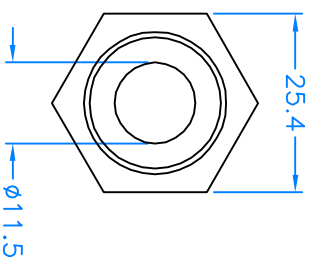
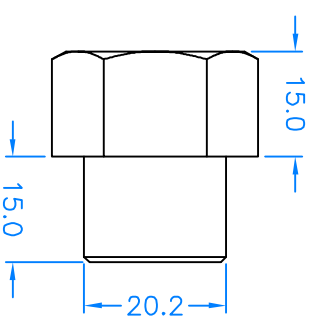
RORTY DESIGN
 PO BOX 13270
 LAW COURTS
 MELBOURNE
 VIC 8010
 AUSTRALIA

info@rorty-design.com
 www.rorty-design.com

REVISIONS		
REV No.	DATE & No	ZONE



TAP ONE RH 1/2-20 UNF
AND ONE LH 1/2-20 UNF

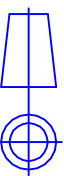


MATERIAL: 25.4 COLD ROLLED HEX BAR

SCALE	1:1	SHEET	
DRAWN		DATE	23.12.04
TITLE			
PANHARD FERULE			
DRG No	RDDDA09		

A3

FIRST ANGLE PROJECTION



THIS DRAWING IS CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT SHALL NOT BE LOANED, COPIED OR DISCLOSED TO ANY OTHER PERSON NOR USED FOR ANY OTHER PURPOSE WITHOUT THE WRITTEN CONSENT OF RORTY DESIGN

- UNLESS SPECIFIED OTHERWISE:
- 1. ALL DIMENSIONS ARE IN MILLIMETERS
 - 2. REMOVE ALL BURRS & SHARP EDGES
 - 3. CORNER RADII R0.75
 - 4. CHAMFER SIZE 0.75 x 45°
 - 5. CONCENTRICITY 0.05 TIR

UNLESS SPECIFIED OTHERWISE: TOLERANCES ANGULAR ± 0.5°

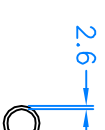
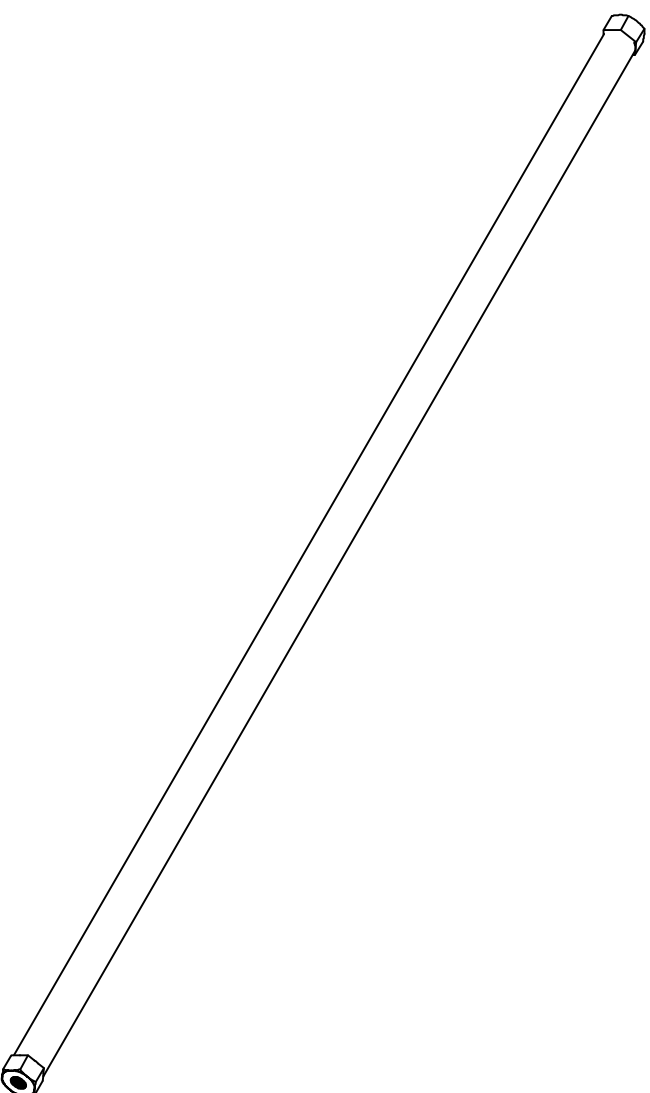
.X ± 0.5
.XX ± 0.25
.XXX ± 0.125



RORTY DESIGN
 PO BOX 13270
 LAW COURTS
 MELBOURNE
 VIC 8010
 AUSTRALIA

info@rorty-design.com
 www.rorty-design.com

REVISIONS		
REV No.	DATE & No	ZONE

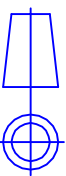


SCALE	SHEET
5:1	
DRAWN	DATE
	23.12.04
TITLE	
PANHARD TUBE	

DRG No RDDDA10

A3

FIRST ANGLE PROJECTION



THIS DRAWING IS CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT SHALL NOT BE LOANED, COPIED OR DISCLOSED TO ANY OTHER PERSON NOR USED FOR ANY OTHER PURPOSE WITHOUT THE WRITTEN CONSENT OF RORTY DESIGN

- UNLESS SPECIFIED OTHERWISE:
1. ALL DIMENSIONS ARE IN MILLIMETERS
 2. REMOVE ALL BURRS & SHARP EDGES
 3. CORNER RADIUS R0.75
 4. CHAMFER SIZE 0.75 x 45°
 5. CONCENTRICITY 0.05 TIR

UNLESS SPECIFIED OTHERWISE: TOLERANCES ANGULAR ± 0.5°

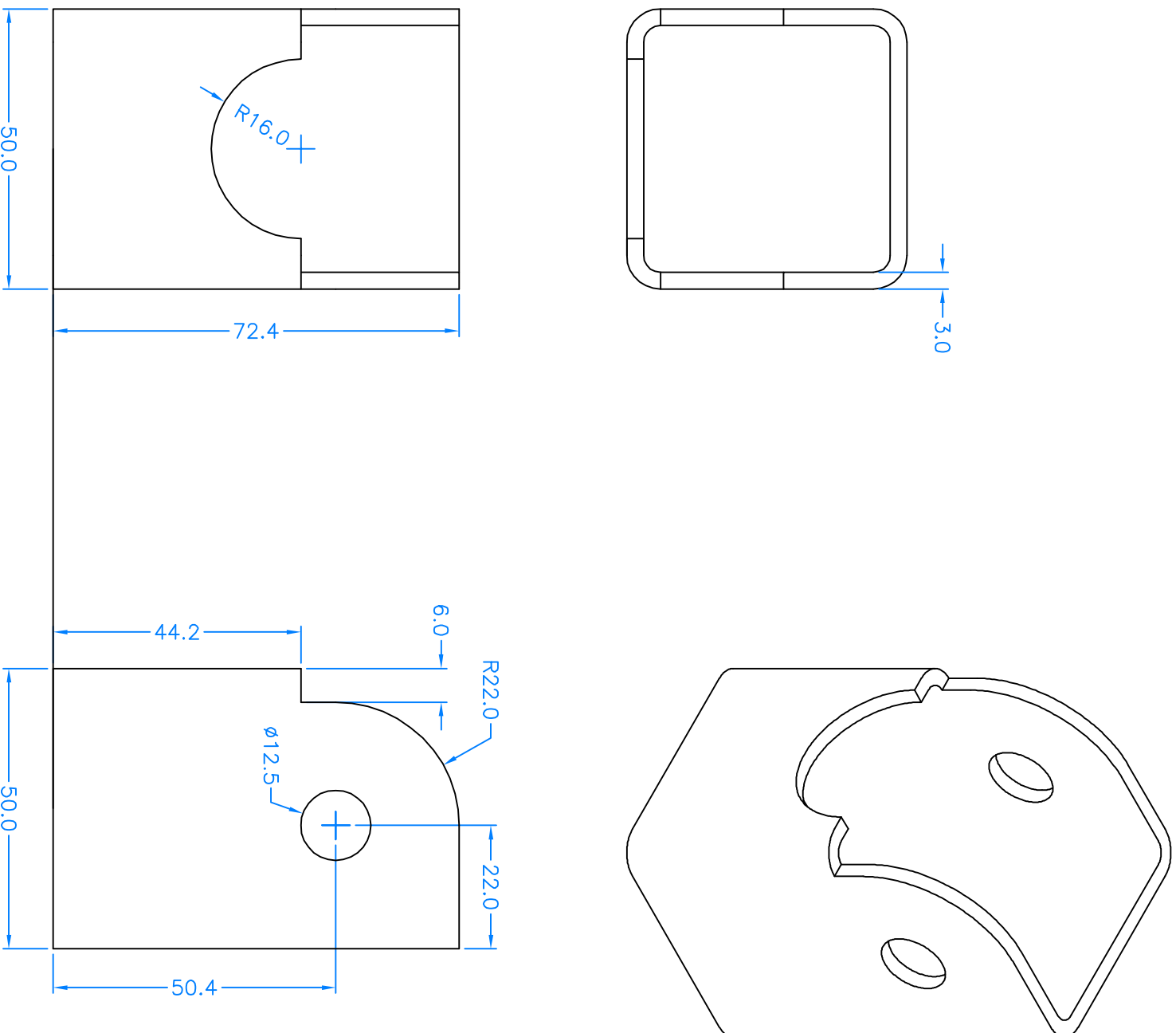
.X ± 0.5
.XX ± 0.25
.XXX ± 0.125



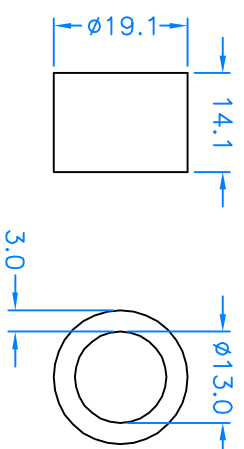
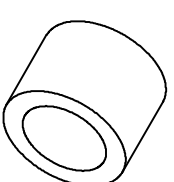
RORTY DESIGN
 PO BOX 13270
 LAW COURTS
 MELBOURNE
 VIC 8010
 AUSTRALIA

info@rorty-design.com
 www.rorty-design.com

REVISIONS		ZONE
REV No.	DATE & No	



MATERIAL: 50 X 50 X 3 SHS



MATERIAL: ϕ 19.05 1040 ROUND BAR

SCALE	1:1	SHEET
DRAWN	DATE	23.12.04

PANHARD MOUNT
- CHASSIS

DRG No RDDDA11