

PRACTICA
FOUNDATION

TITLE: **0 micro diesel**

DRAWN BY:
Jan Nederstigt

DATE:
17-12-09

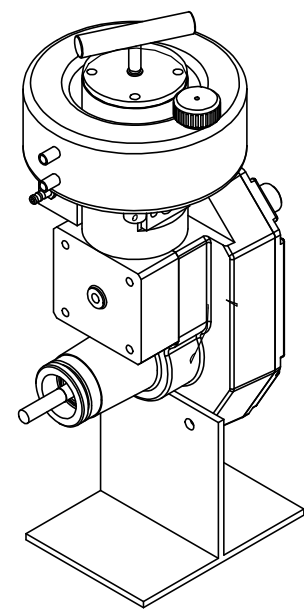
VERSION:
Final

DWG NO. **000**

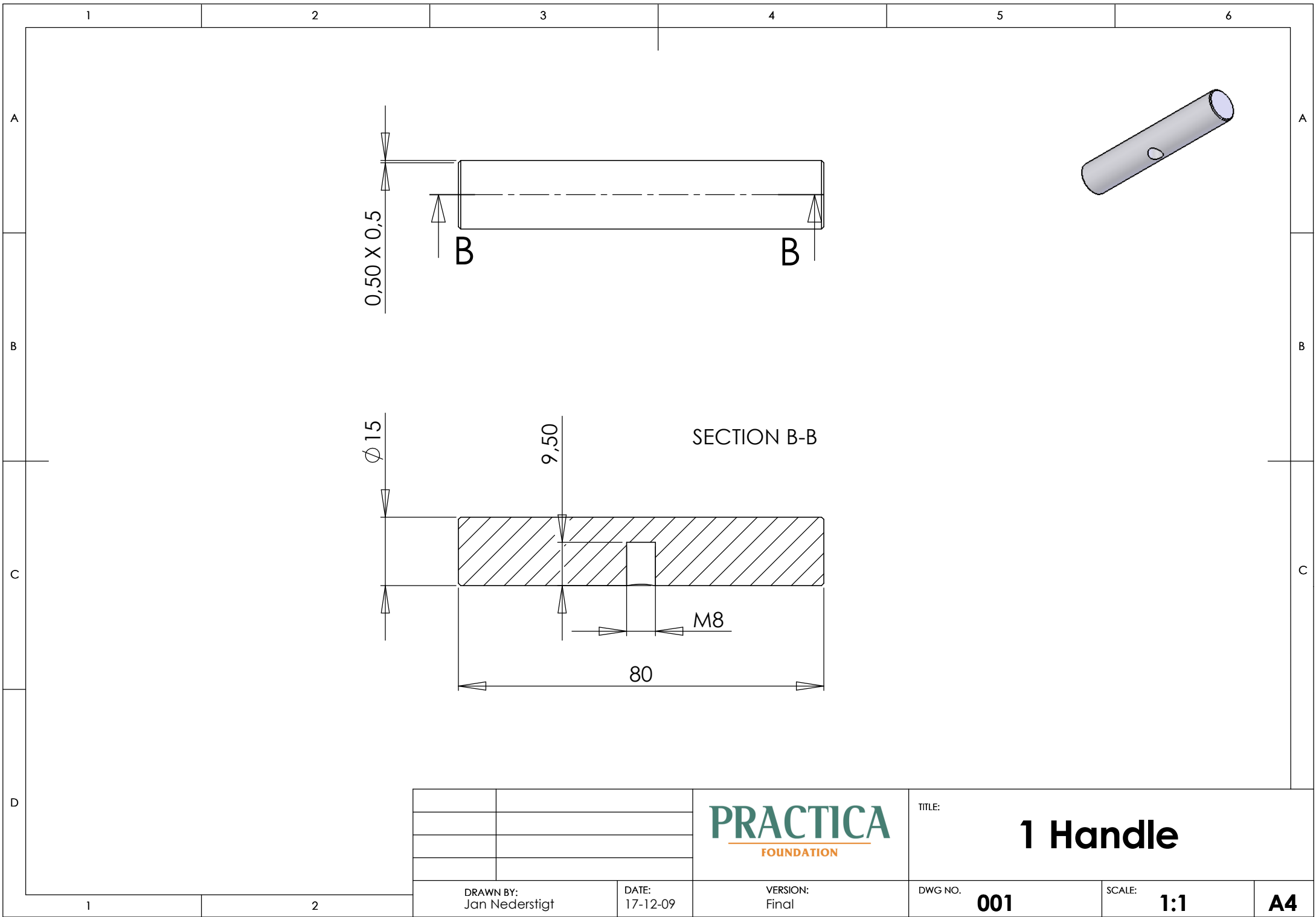
SCALE: **1:5**

A4

Prt nr.	Description	Q.	Material	Observations	Prt nr.	Description	Q	Material	Observations
1	grip	1	steel or CI		39	air valve	1	brass	
2	Discspring	2	steel		40	needle valve	1	brass	
3	cover plate	1	steel		41	needle valve tube	1	brass	
4	O-ring	2	rubber	9mm	43	conrod bush	1	brass	
5	spindle nut	1	steel		44	bush	1	steel	
6	fuel tank	1	steel		45	lubrication disc	2	steel	
7	spindle	1	steel		46	shaft	1	steel	
8	cylinder barrel	1	aluminium		47	bush	1	steel	
9	piston	1	aluminium	Purchase from piston mnft	48	spring	1	spring steel	
10	piston ring	3	CI	Comes with piston	49	gear box	1	CI	
11	gudgeon pin	1	steel	Comes with piston	50	Cover, governor	1	CI	
12	cover	1	CI		51	fuel valve	1		(will be supplied)
13	gearwheel	2	steel or CI		52	ring	1		ring btw starter shaft bearings
14	flywheel	1	steel		53	dowel	1	steel	
15	gearwheel	2	steel or CI		54	dowel Ø3x6mm	2	steel	
16	shaft	1	steel		55	Allen screw M5x15	9		
17	pin	1	steel		56	stud bolt M6x55	2		
18	ball bearing	3	42x20x12	SKF6004	57	nut M6	2		
19	oil seal	1	42x20x7	ERIKS SIMRIT 10005911	58	washer M6	2		
20	cover	1	steel or CI		59	bolt M6x25	1		(for air valve)
21	ball	6	steel, 8mm		60	set screw M3x5	1		(for air valve)
22	cone	1	plastic IM		61	dowel Ø5x15mm	2		(for cover)
23	governor fork	1	steel		62	lock washer	1		(for governer)
24	screw	1	M5		63	bolt M6x10	1		(for governer)
26	stand	1	steel		64	bolt M6x140	4		(for cylinder)
27	cylinder sleeve	1	cast iron		65	bolt M8x...	2		(for support)
28	conrod	1	steel alloy		66	oil seal bush	1		(for PTO shaft)
29	crankshaft assy	1	forged steel?		67	oil seal 32x22x7	2		ERIKS 10005923
30	ball bearing	2	42x15x13	SKF6302	68	lock washer M10	1		(for PTO shaft)
31	crankcase half	1	CI		69	nut M10	1		(for PTO shaft)
32	oil seal 32x20x7	1		ERIKS SIMRIT 10005902	70	allen bolt M8x15	1		
33	ball bearing 32x20x7	1		SKF6004	71	flat washer M8x15	1		
35	Washer	1	steel		72	seal ring 5x7,5x1	1	copper	
36	exhaust flange	1	steel		73	fuel cap	1		
37	governor lever	1	steel		74	bolt M8x10	1		
38	valve block	1	alum.		75	seal ring M8	1	copper	



	TITLE: 00X part list				
	DRAWN BY: Jan Nederstigt	DATE: 17-12-09	VERSION: Final	DWG NO. 00X	SCALE: 1:5





TITLE: **1 Handle**

DRAWN BY:
Jan Nederstigt

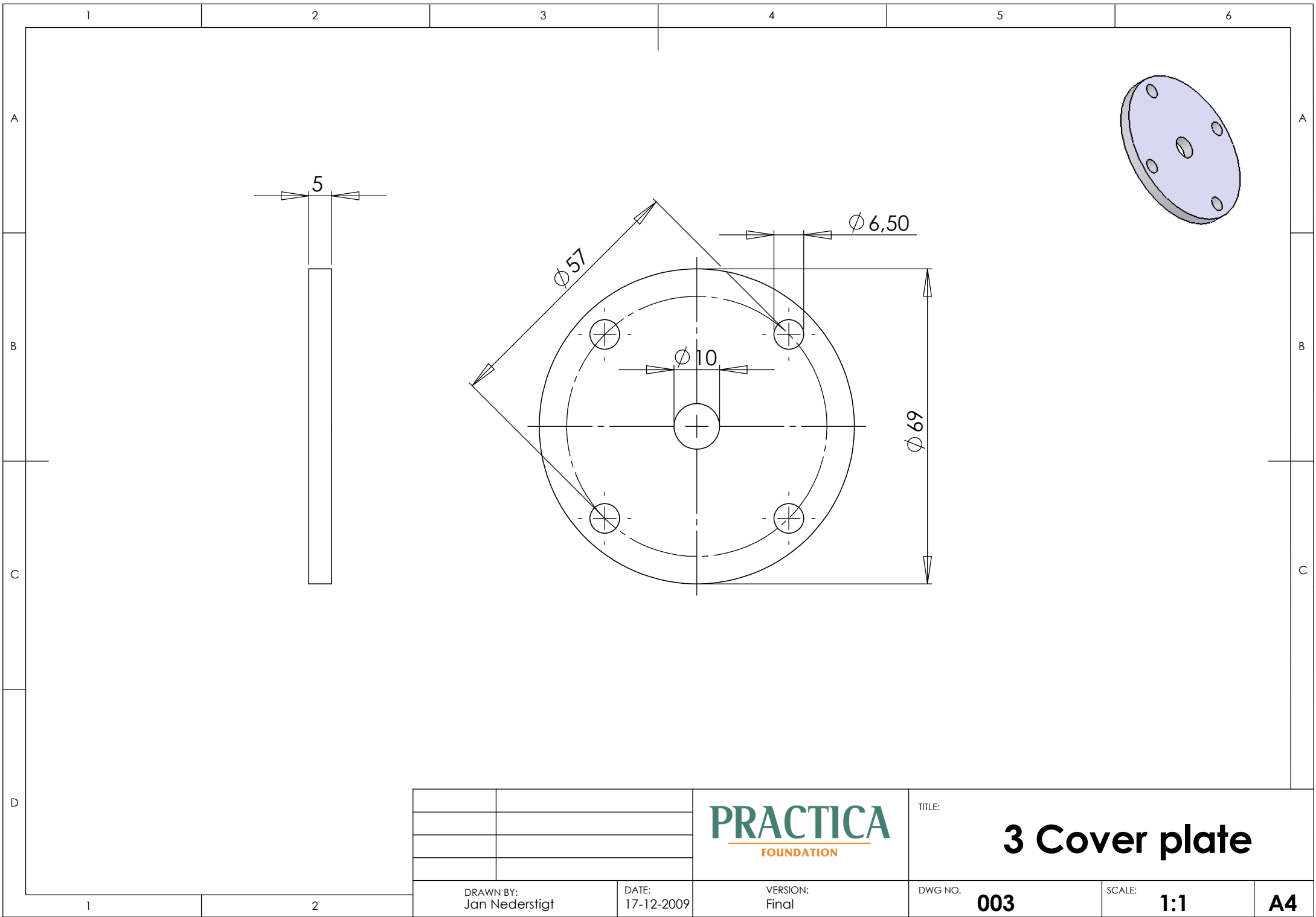
DATE:
17-12-09

VERSION:
Final

DWG NO. **001**

SCALE: **1:1**

A4



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FOUNDATION

TITLE: **3 Cover plate**

DRAWN BY:
Jan Nederstigt

DATE:
17-12-2009

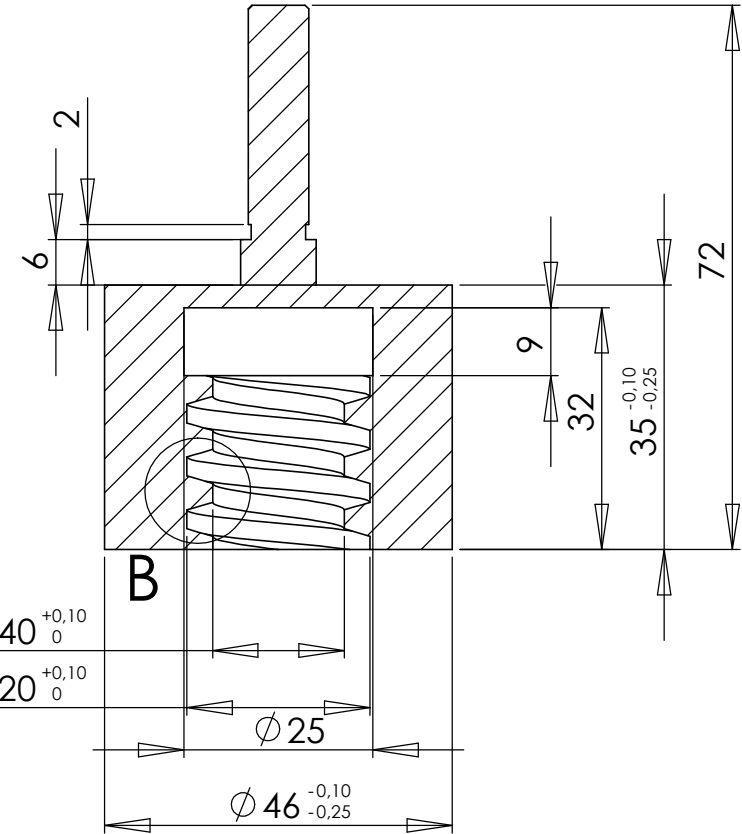
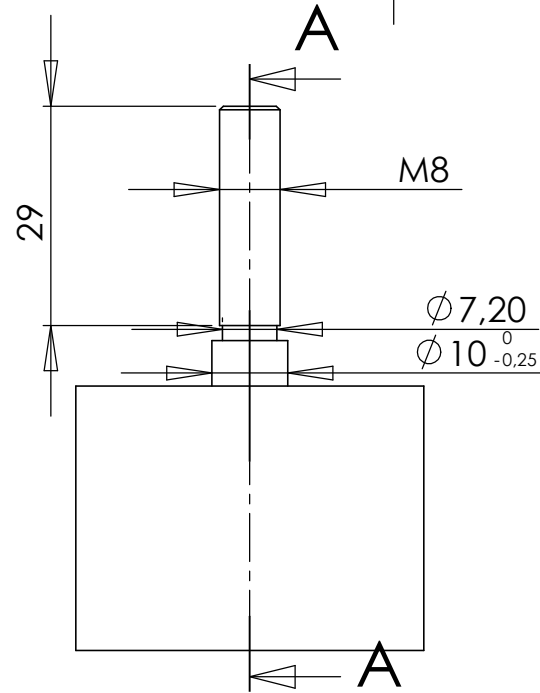
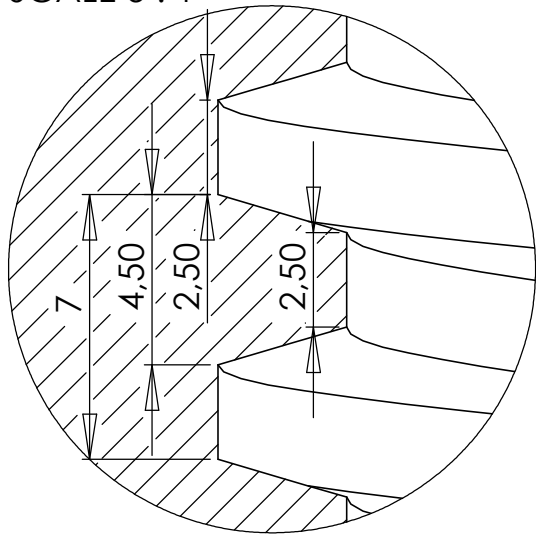
VERSION:
Final

DWG NO. **003**

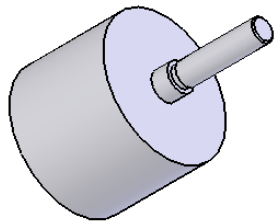
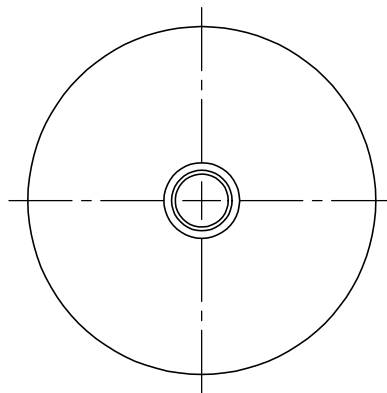
SCALE: **1:1**

A4

DETAIL B
SCALE 5 : 1



SECTION A-A



DRAWN BY: Jan Nederstigt	DATE: 17-12-2009

PRACTICA
FOUNDATION

TITLE:

5 Spindle nut

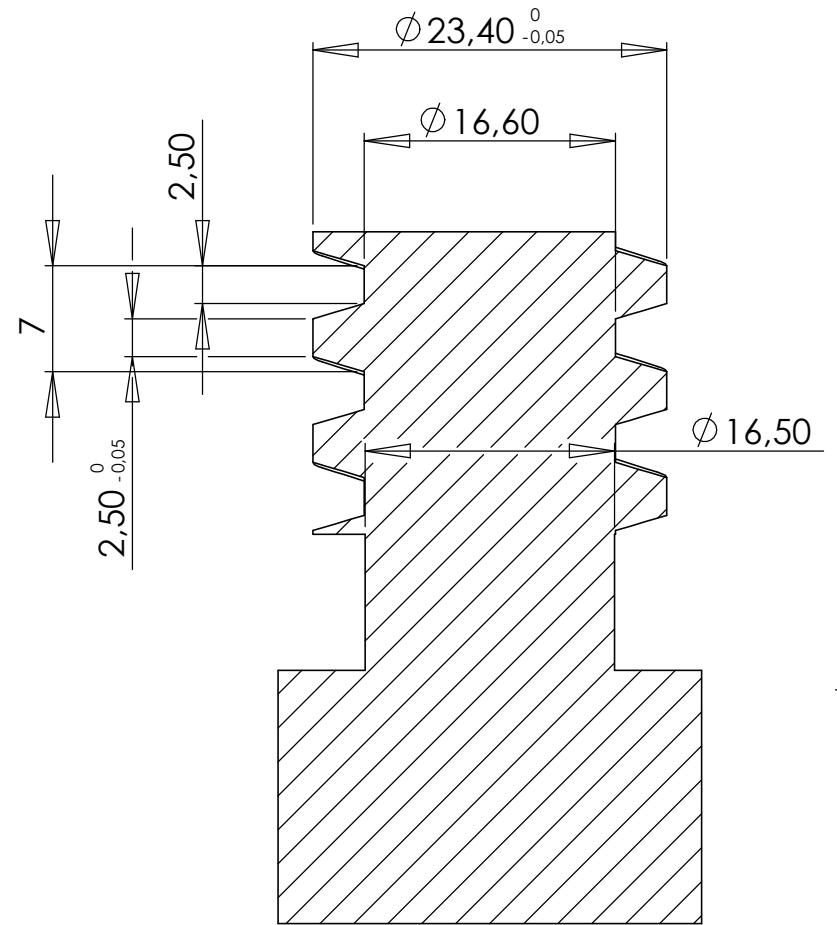
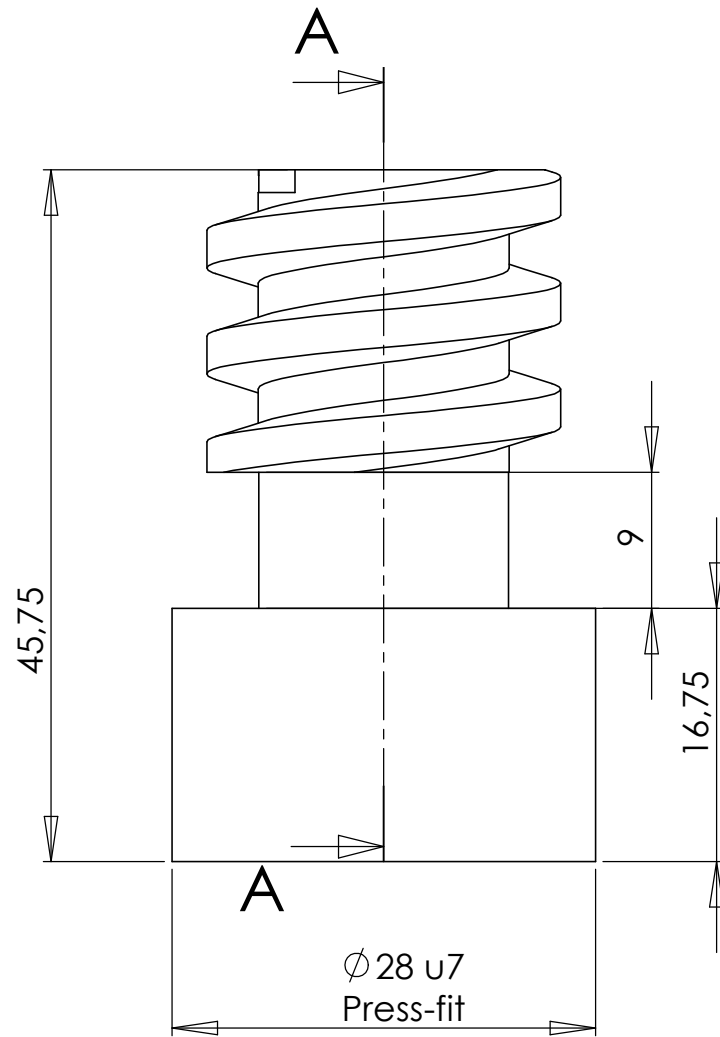
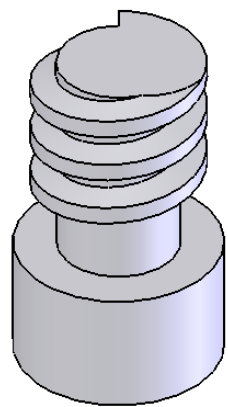
DWG NO.

005

SCALE:

1:1

A4



DRAWN BY: Jan Nederstigt	DATE: 17-12-2009

PRACTICA
FOUNDATION

TITLE:

7 Spindle

DWG NO.

007

SCALE:

2:1

A4

1 2 3 4

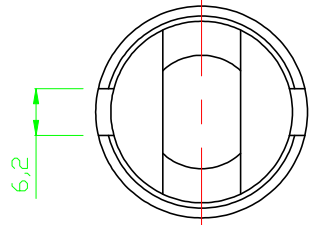
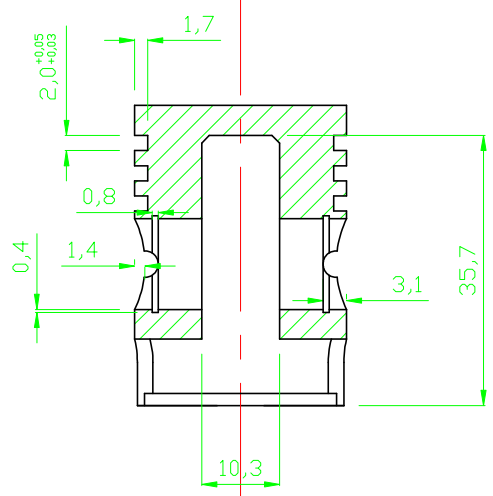
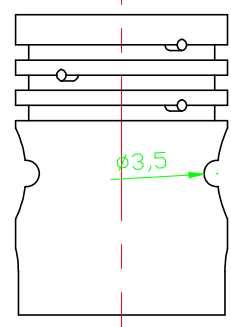
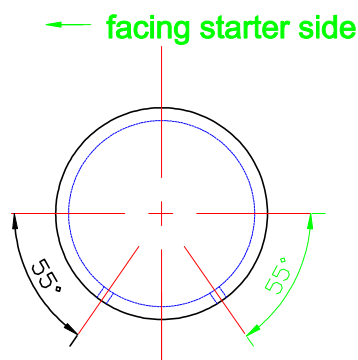
A

B

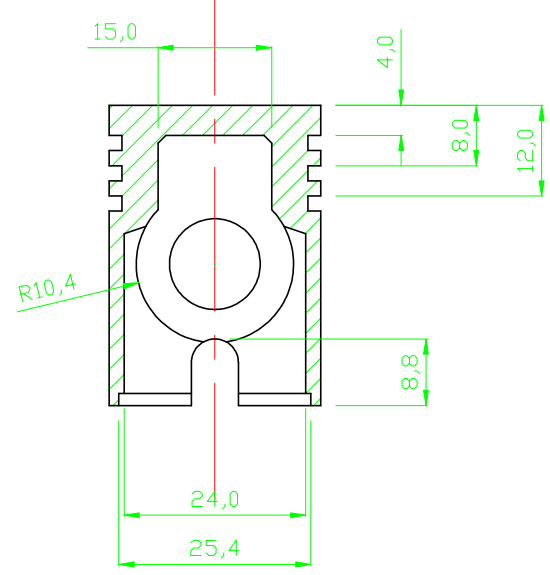
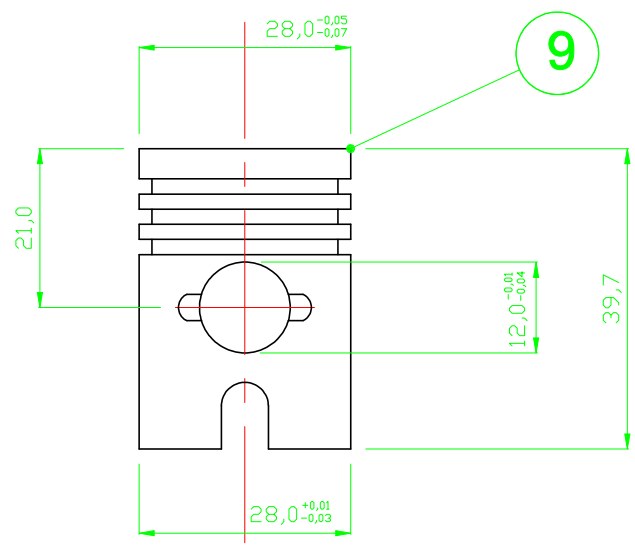
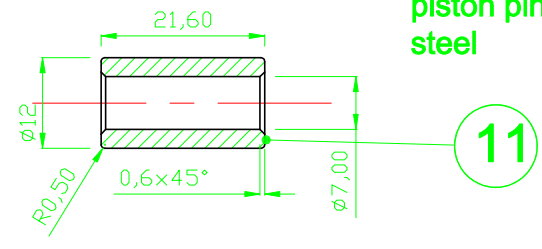
C

D

E



piston pin steel



Material Mahle no. 244 or equal
 Piston rings: 28x2 according to DIN 7310
 Top piston ring Chromium plated

A

B

C

D

E

Project

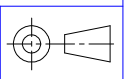
Micro diesel
 drawing update

Designed by
Jan Nederstigt

Version
1.0.1

Date
17-4-2007

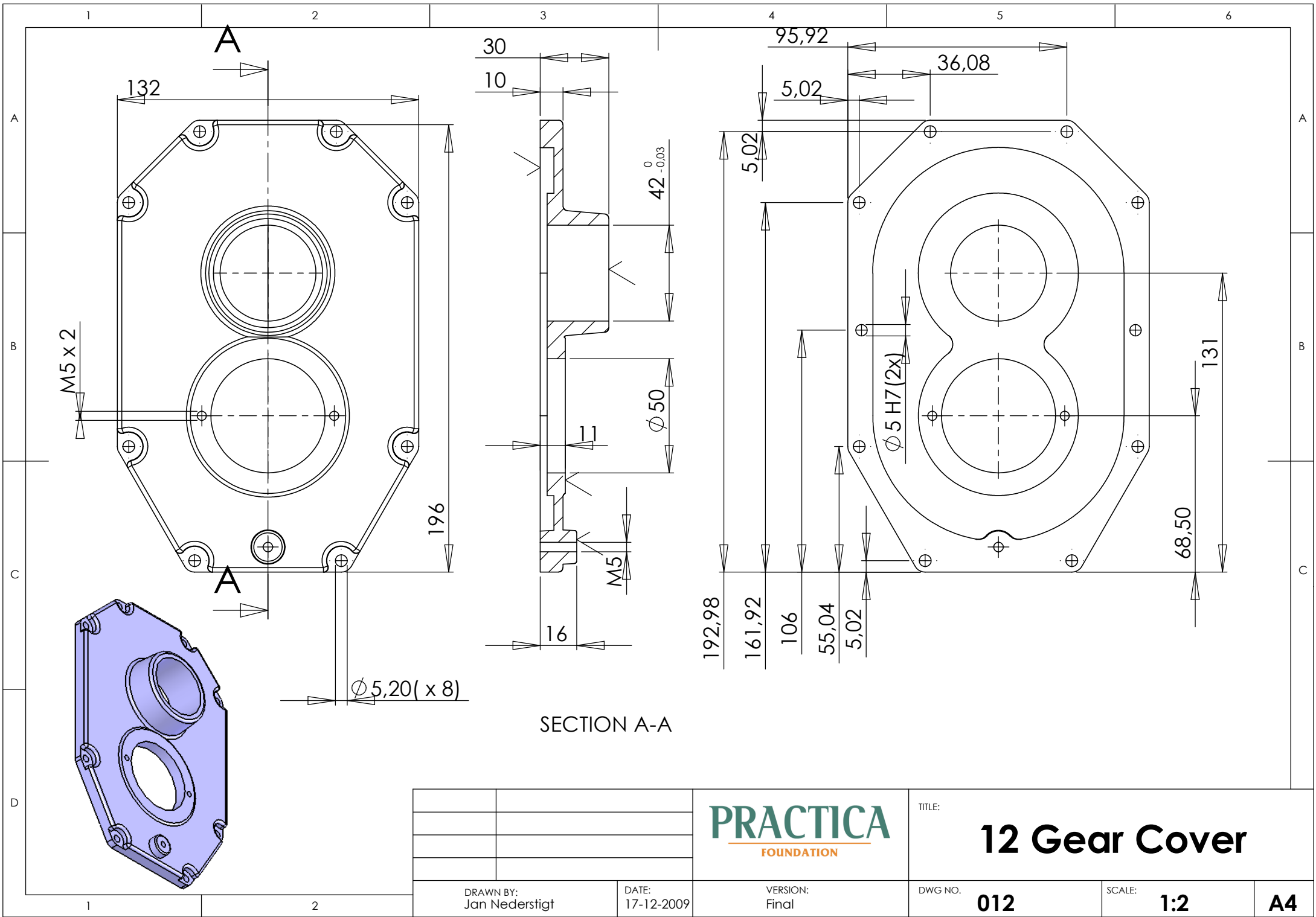
Scale
1:1



Part
Piston

PRACTICA
 Foundation

F



SECTION A-A

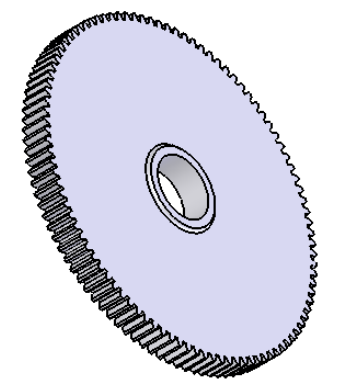
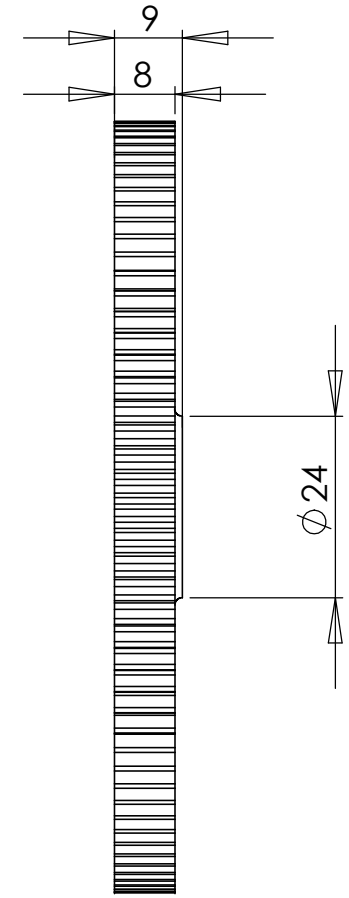
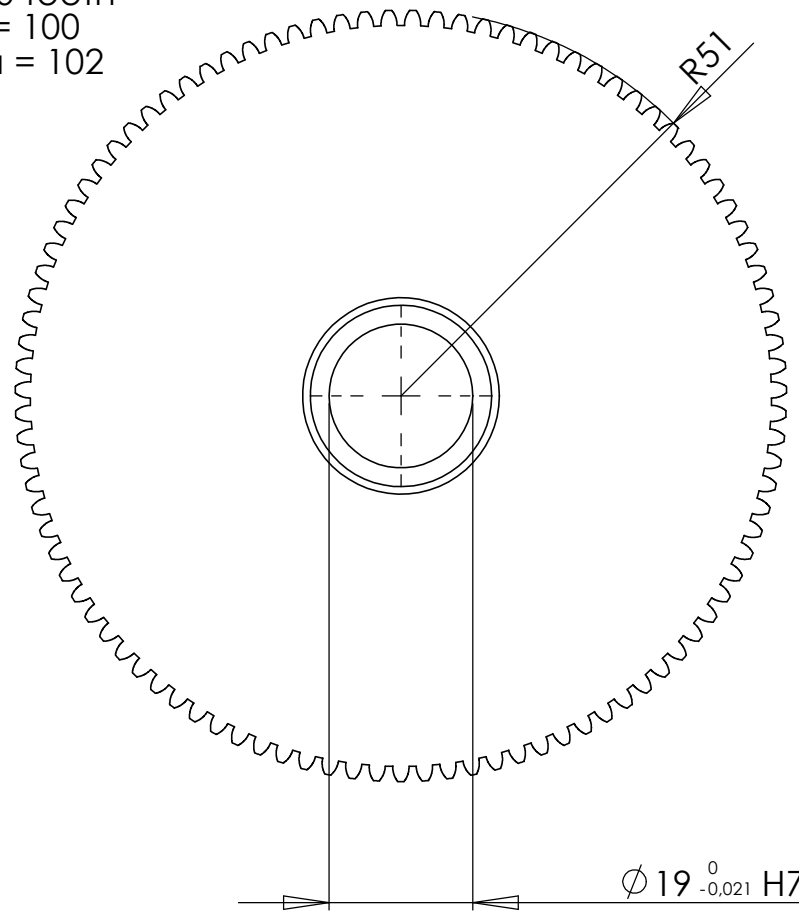
DRAWN BY: Jan Nederstigt	DATE: 17-12-2009

PRACTICA
FOUNDATION

VERSION:
Final

TITLE: 12 Gear Cover	
DWG NO. 012	SCALE: 1:2
A4	

100 teeth
 $d = 100$
 $d_a = 102$



$\varnothing 19 \begin{smallmatrix} 0 \\ -0.021 \end{smallmatrix} H7$

PRACTICA
 FOUNDATION

TITLE: **13 Gearwheel**

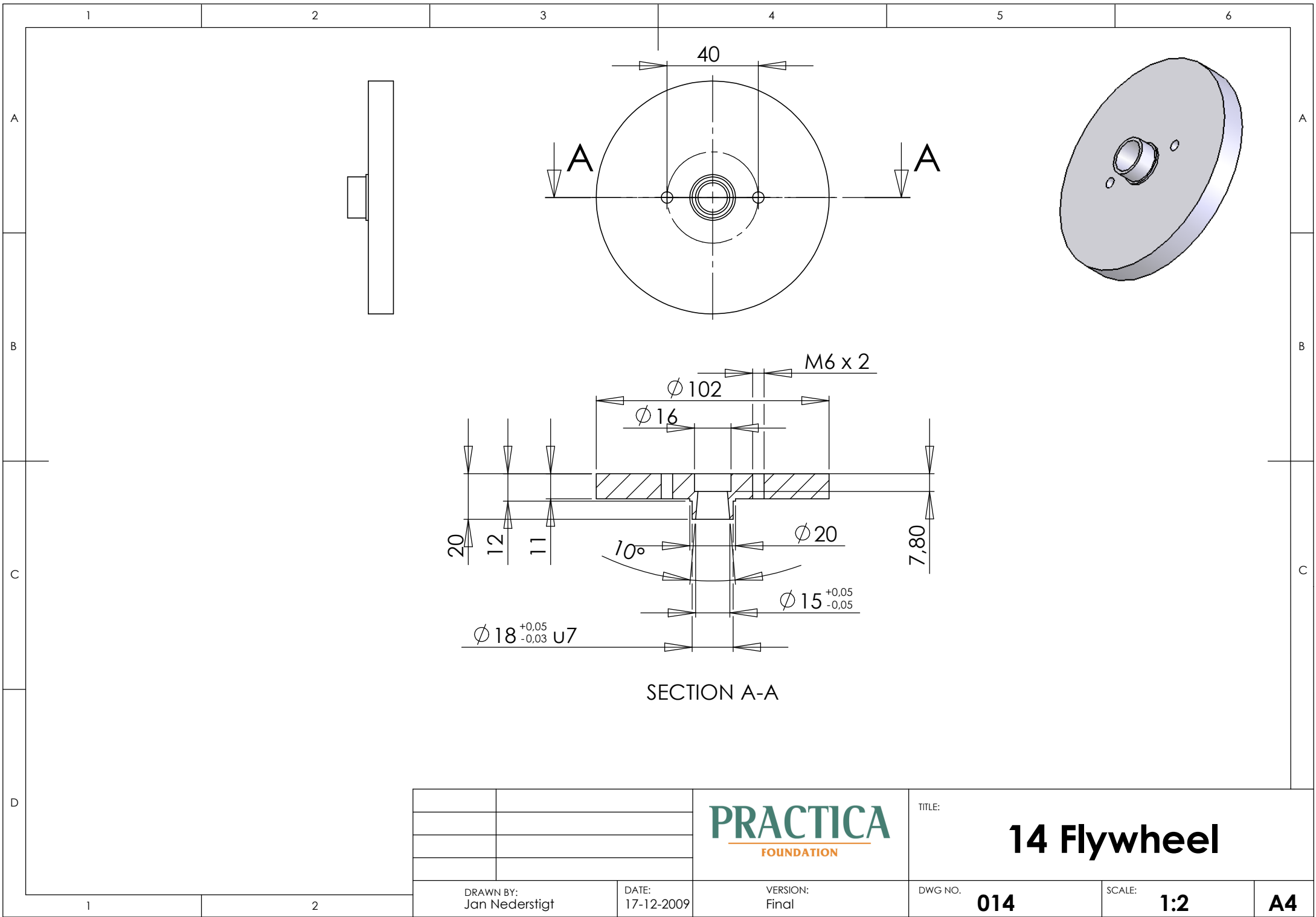
DRAWN BY: Jan Nederstigt
 DATE: 17-12-2009

VERSION: Final

DWG NO. **013**

SCALE: **1:2**

A4



PRACTICA
FOUNDATION

TITLE: **14 Flywheel**

DRAWN BY:
Jan Nederstigt

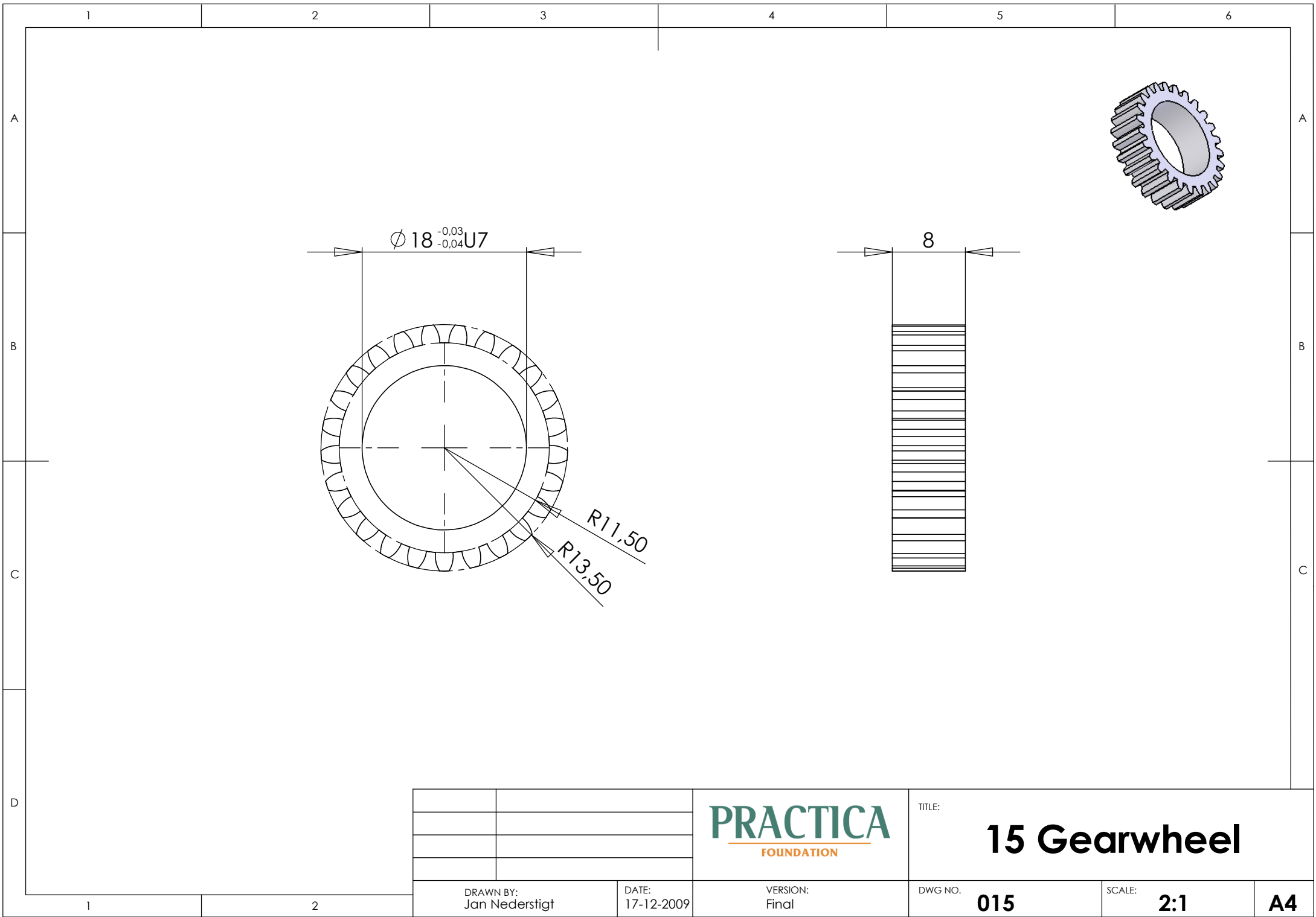
DATE:
17-12-2009

VERSION:
Final

DWG NO. **014**

SCALE: **1:2**

A4



PRACTICA
FOUNDATION

TITLE: **15 Gearwheel**

DRAWN BY:
Jan Nederstigt

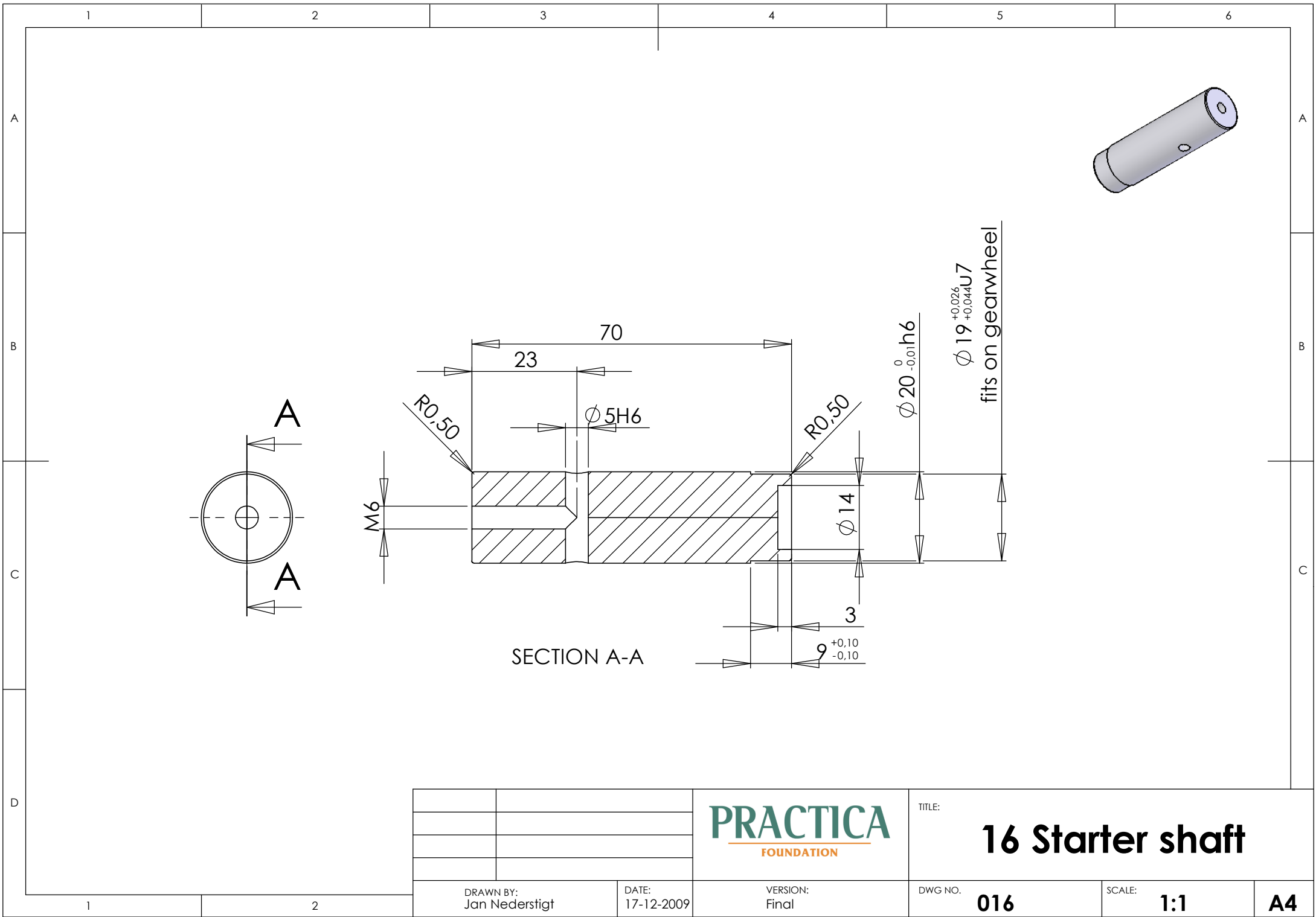
DATE:
17-12-2009

VERSION:
Final

DWG NO. **015**

SCALE: **2:1**

A4



SECTION A-A



TITLE: **16 Starter shaft**

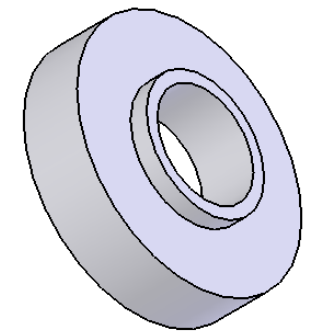
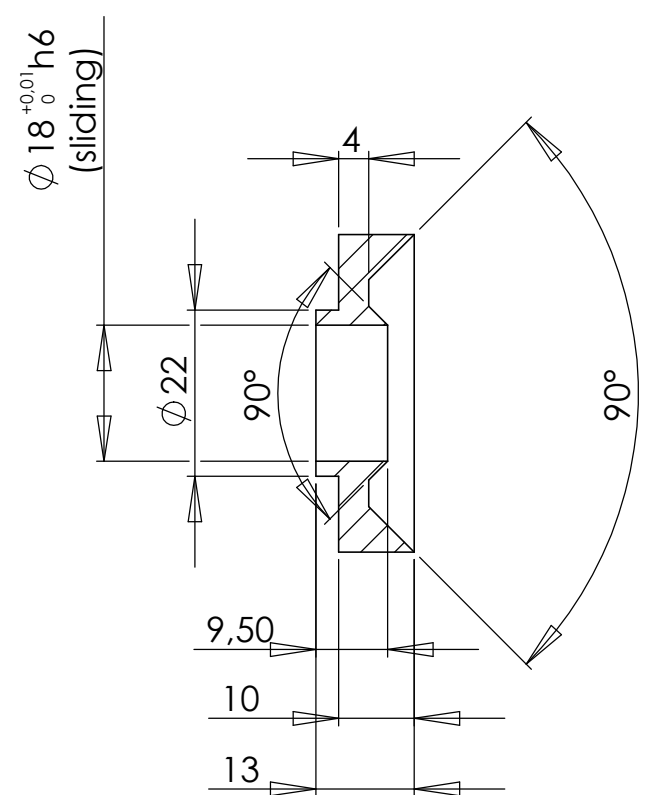
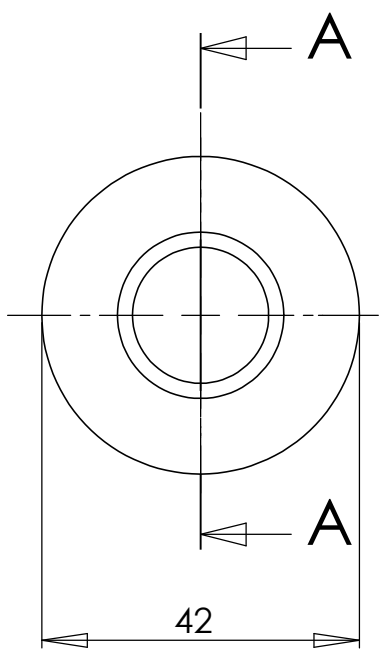
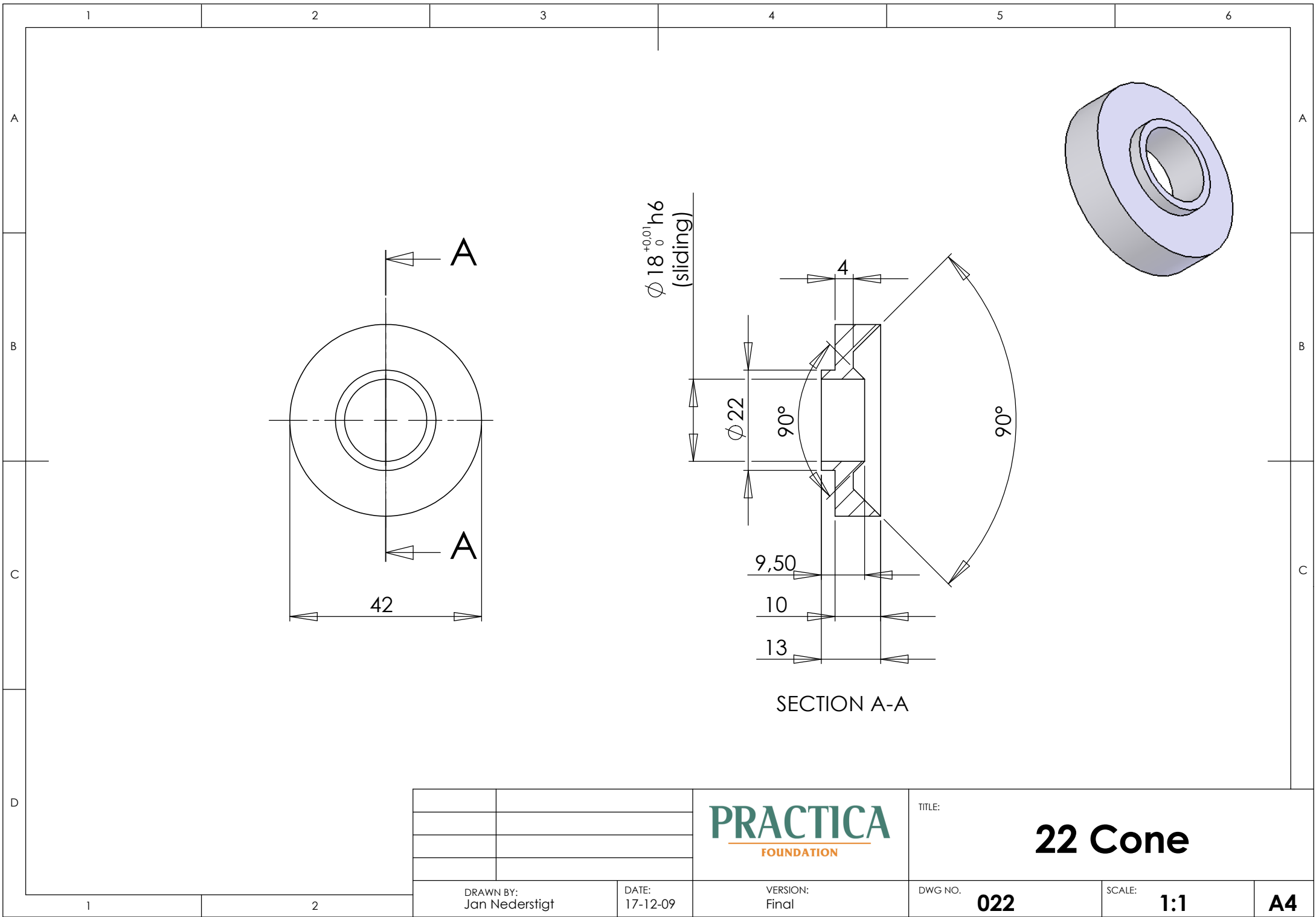
DRAWN BY: Jan Nederstigt
DATE: 17-12-2009

VERSION: Final

DWG NO. **016**

SCALE: **1:1**

A4



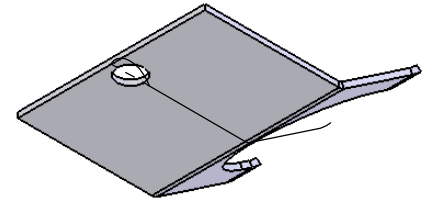
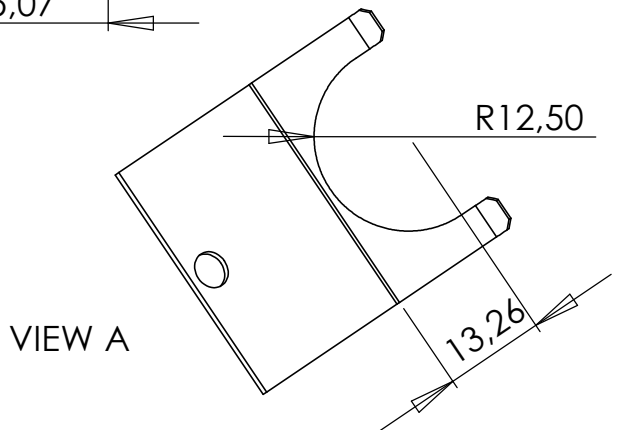
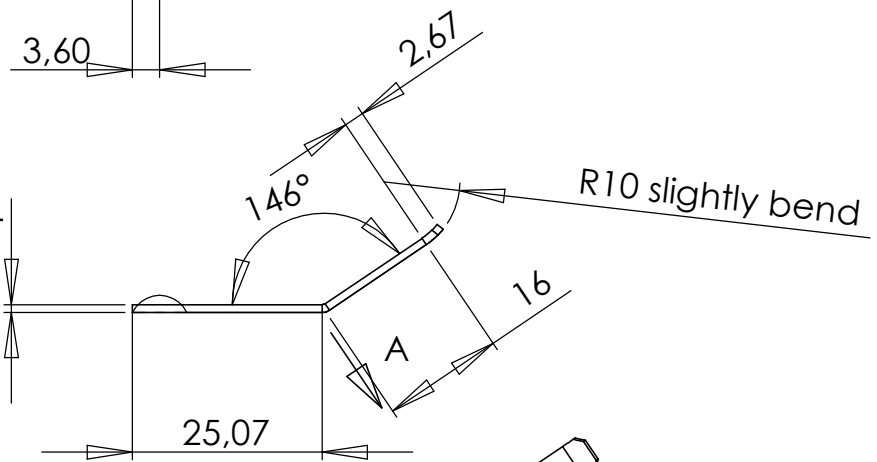
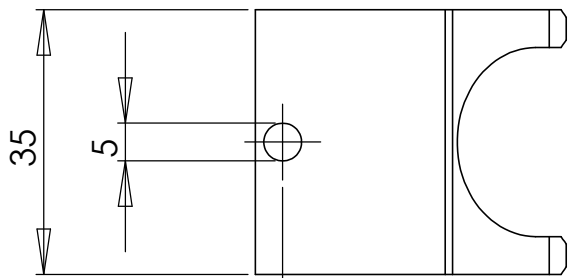
SECTION A-A

DRAWN BY: Jan Nederstigt	DATE: 17-12-09

PRACTICA
FOUNDATION

VERSION:
Final

TITLE:	22 Cone		
DWG NO.	022	SCALE:	1:1
			A4



PRACTICA
FOUNDATION

TITLE: **23 Governer fork**

DRAWN BY:
Jan Nederstigt

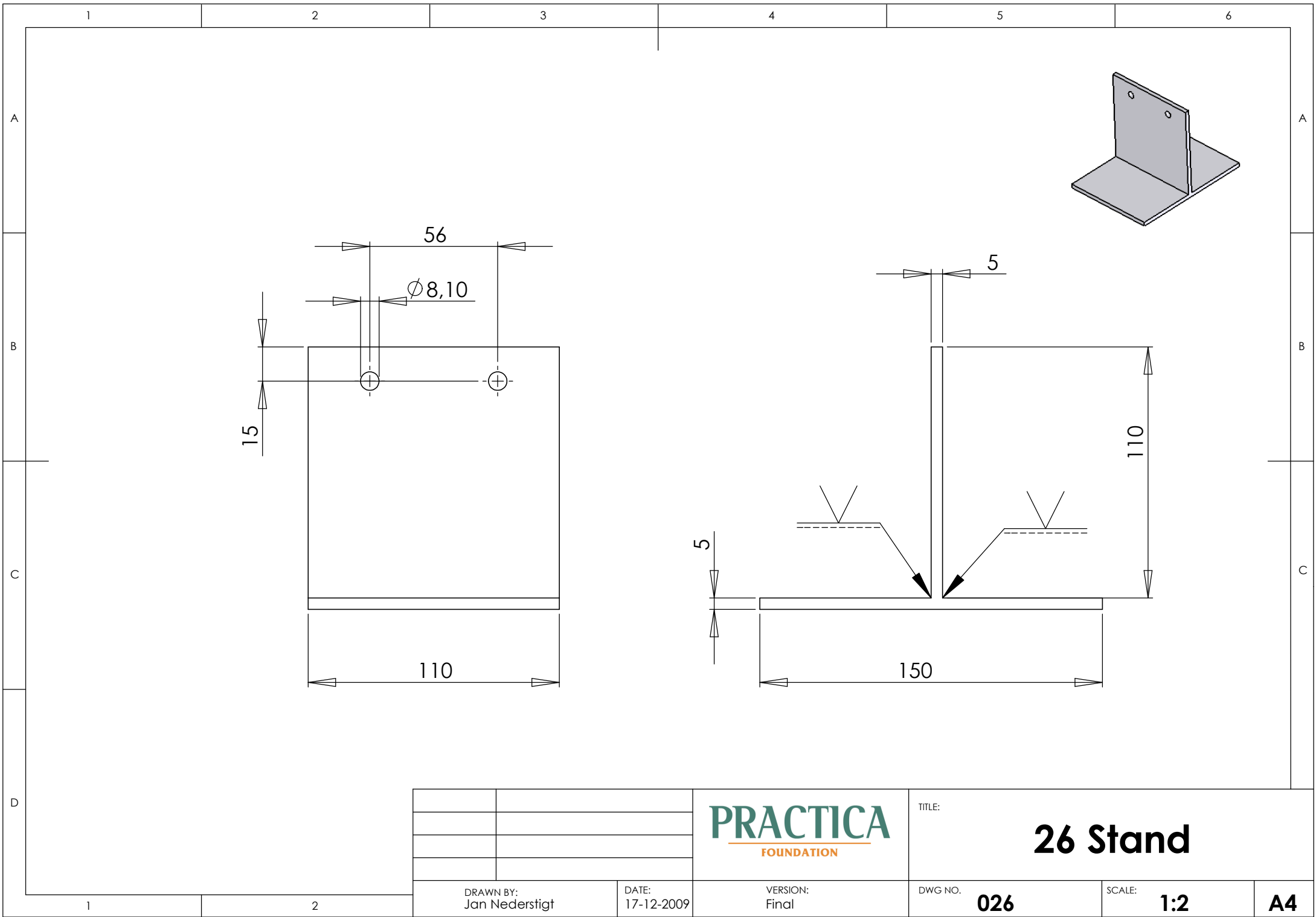
DATE:
17-12-09

VERSION:
Final

DWG NO. **023**

SCALE: **1:1**

A4



PRACTICA
FOUNDATION

TITLE: **26 Stand**

DRAWN BY:
Jan Nederstigt

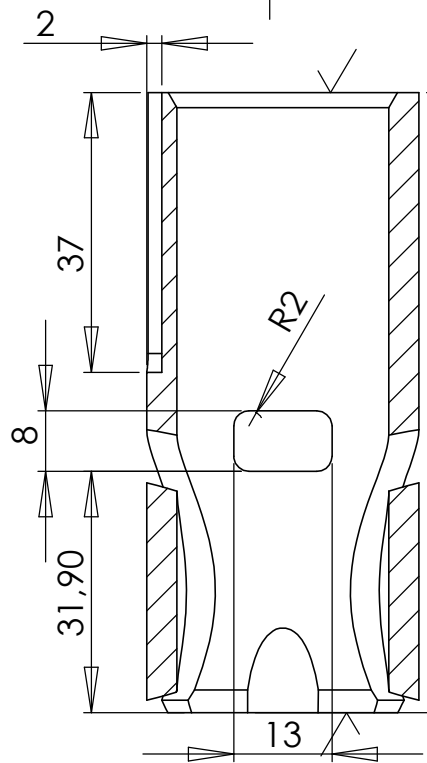
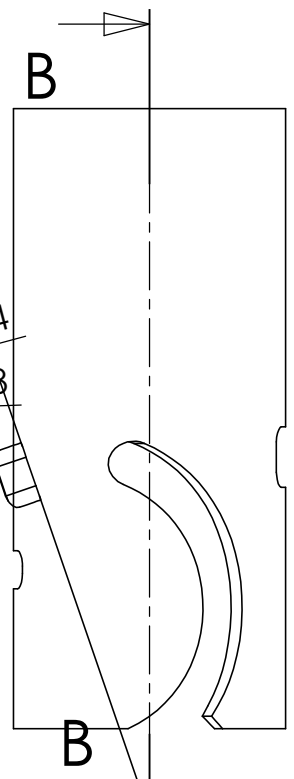
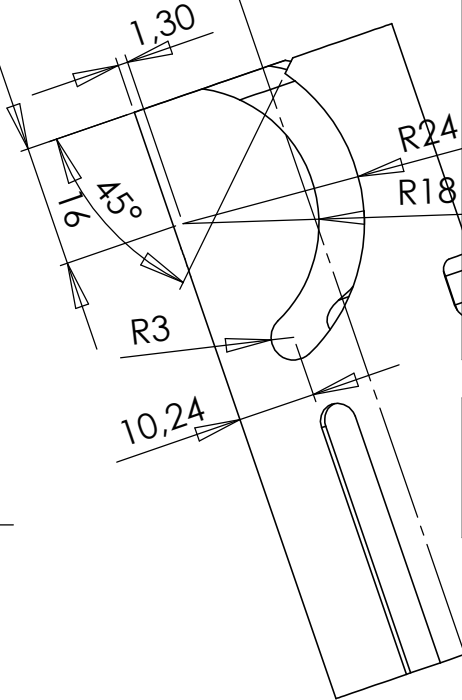
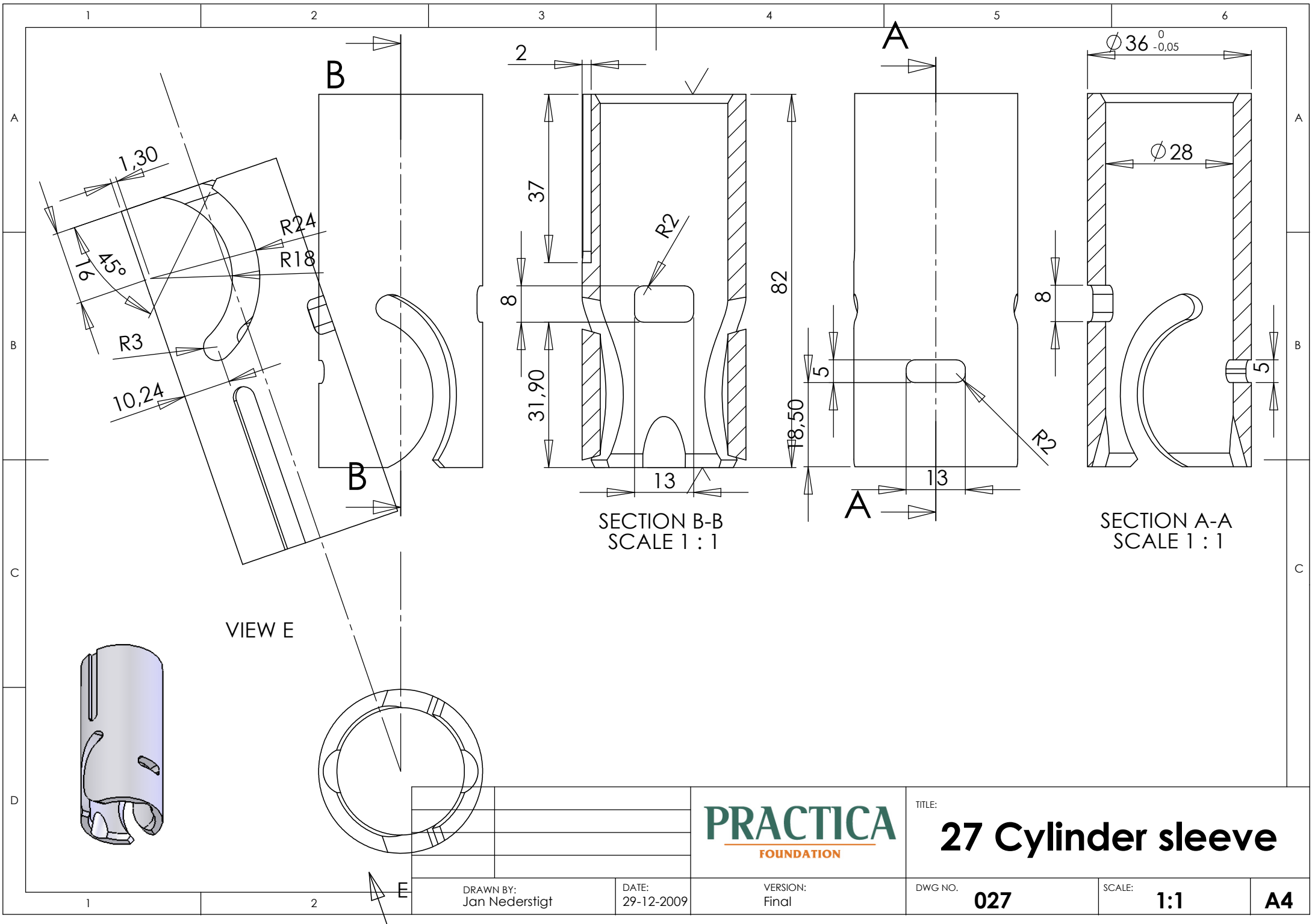
DATE:
17-12-2009

VERSION:
Final

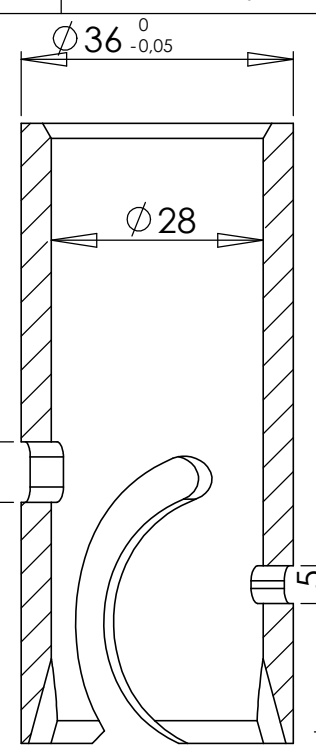
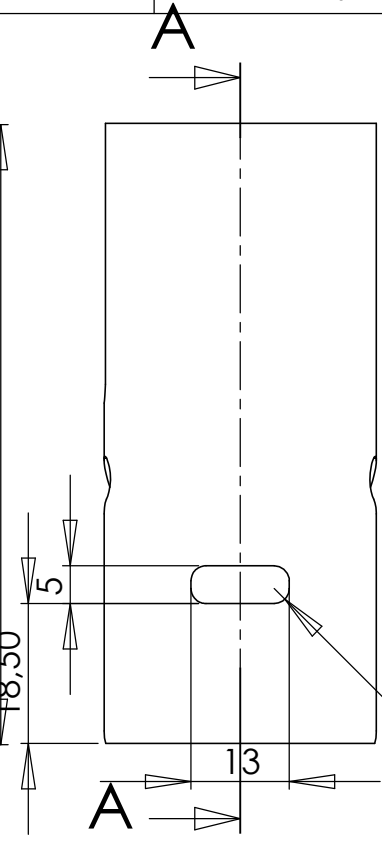
DWG NO. **026**

SCALE: **1:2**

A4

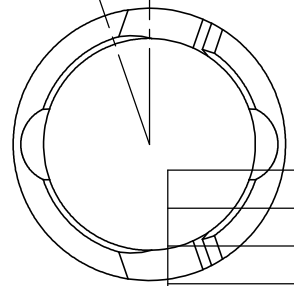
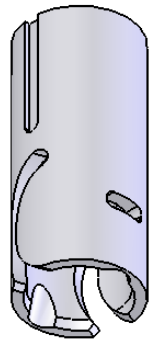


SECTION B-B
SCALE 1 : 1



SECTION A-A
SCALE 1 : 1

VIEW E



DRAWN BY: Jan Nederstigt		DATE: 29-12-2009
VERSION: Final		TITLE: 27 Cylinder sleeve
DWG NO. 027	SCALE: 1:1	A4

PRACTICA
FOUNDATION

TITLE:
27 Cylinder sleeve

DWG NO. **027**

SCALE: **1:1**

A4

1 2 3 4

A

A

B

B

C

C

D

D

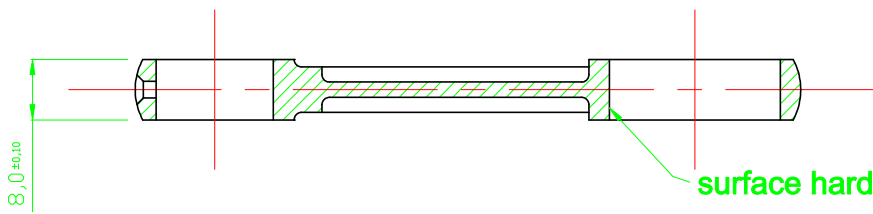
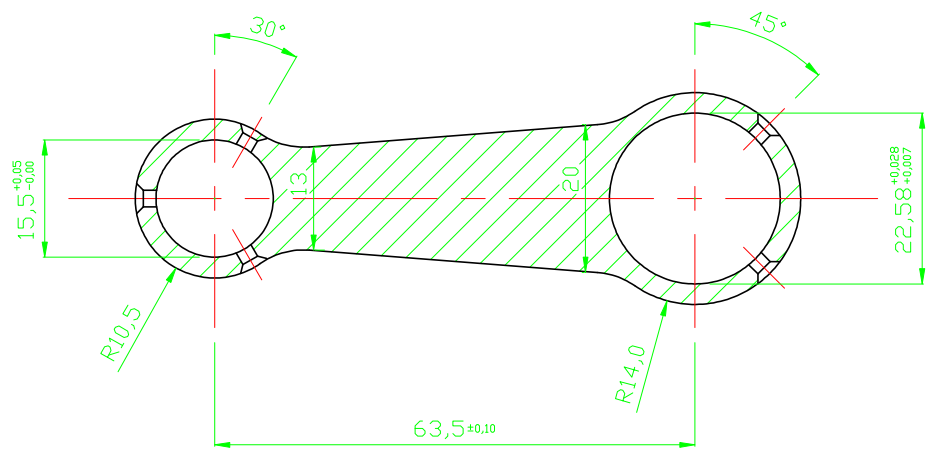
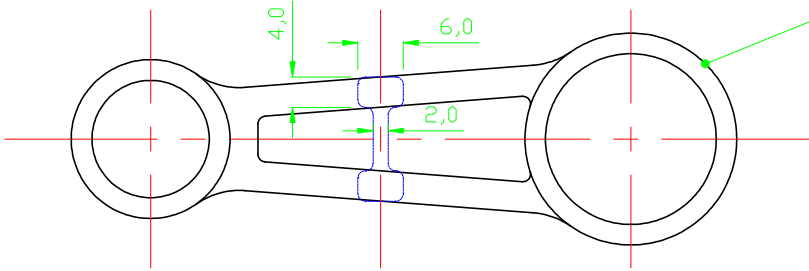
E

E

F

F

28



Material: forged steel

Project Micro diesel drawing update	Designed by Jan Nederstigt	Version 1.0.1	Date 17-4-2007	Scale 1:1	
	Part piston rod			PRACTICA Foundation	



1 | 2 | 3 | 4

A

B

C

D

E

F

A

B

C

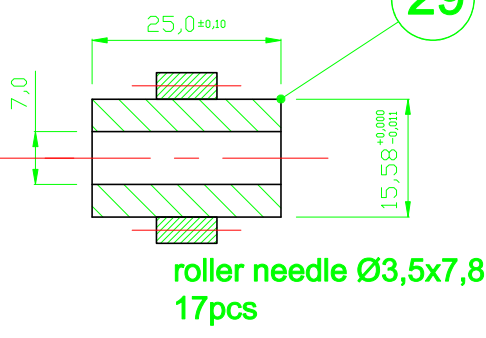
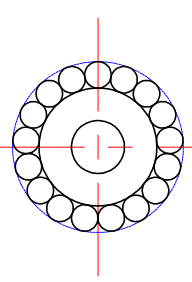
D

E

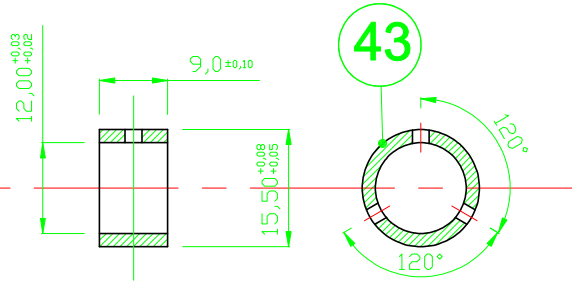
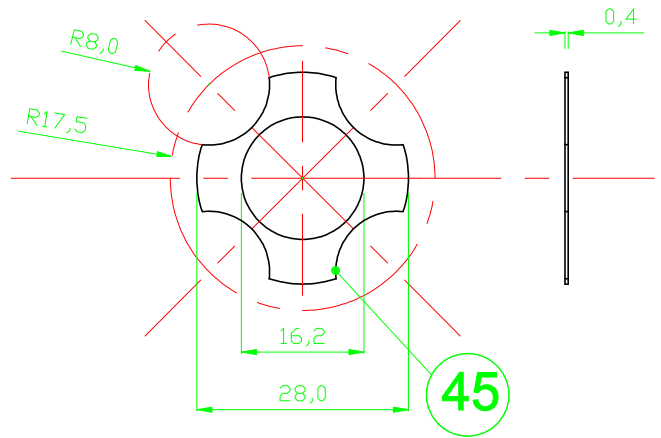
F

lubrication disc (2pcs)
Harden before grinding front and back surfaces

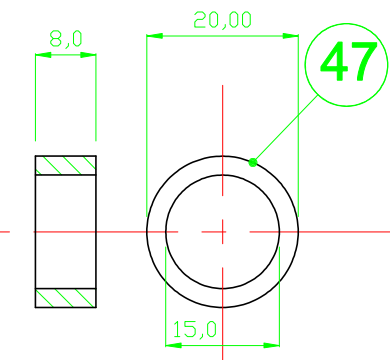
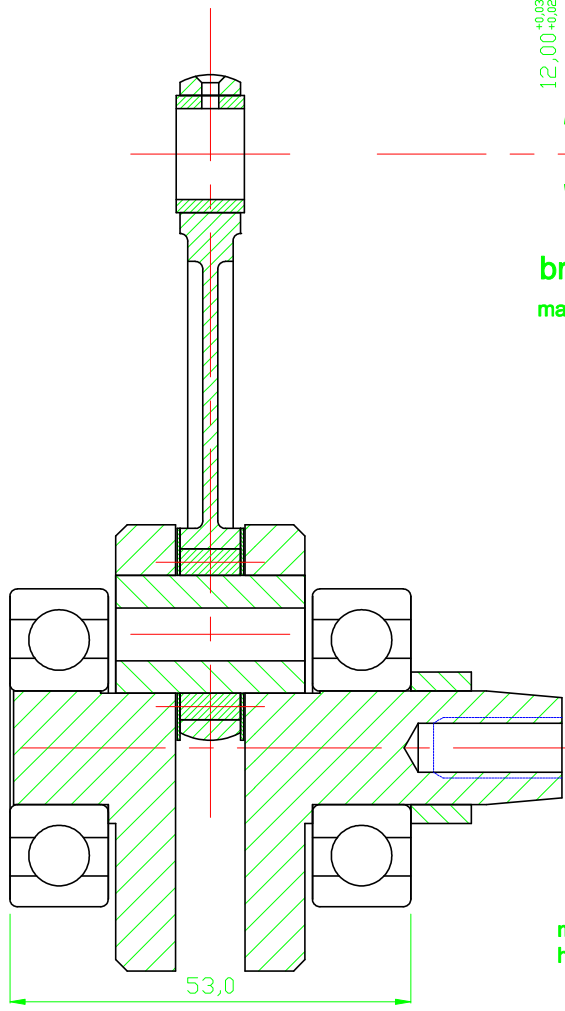
crankshaft pin



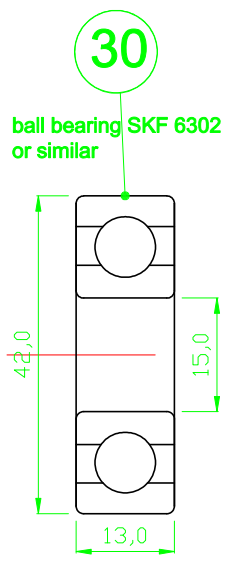
roller needle Ø3,5x7,8
17pcs



bronze sleeve
make press fit to connecting rod



steel sleeve
make press fit to crank shaft
harden and grind to correct dimension



ball bearing SKF 6302
or similar

Project

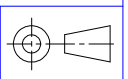
Micro diesel
drawing update

Designed by
Jan Nederstigt

Version
1.0.1

Date
17-4-2007

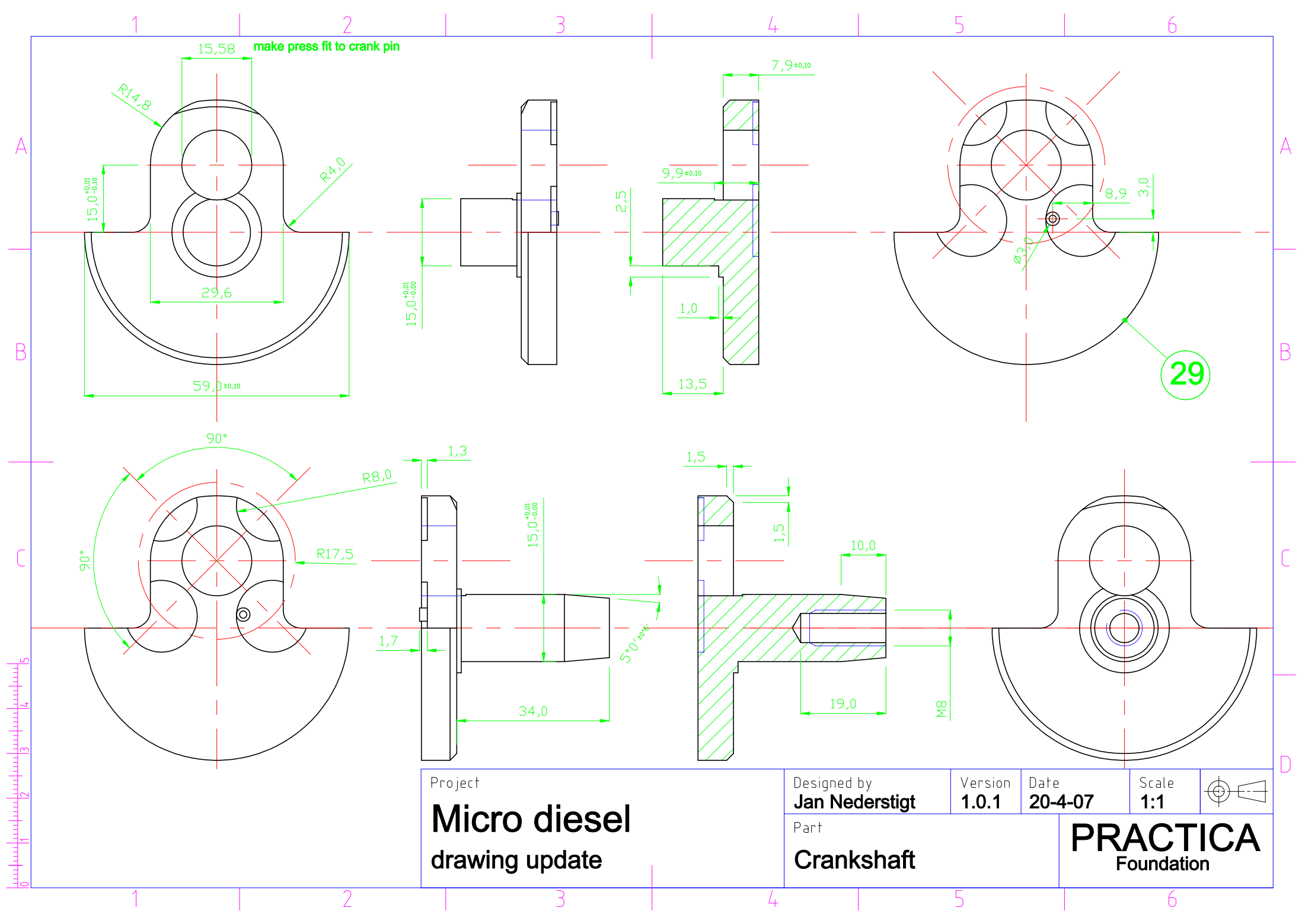
Scale
1:1

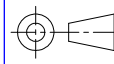


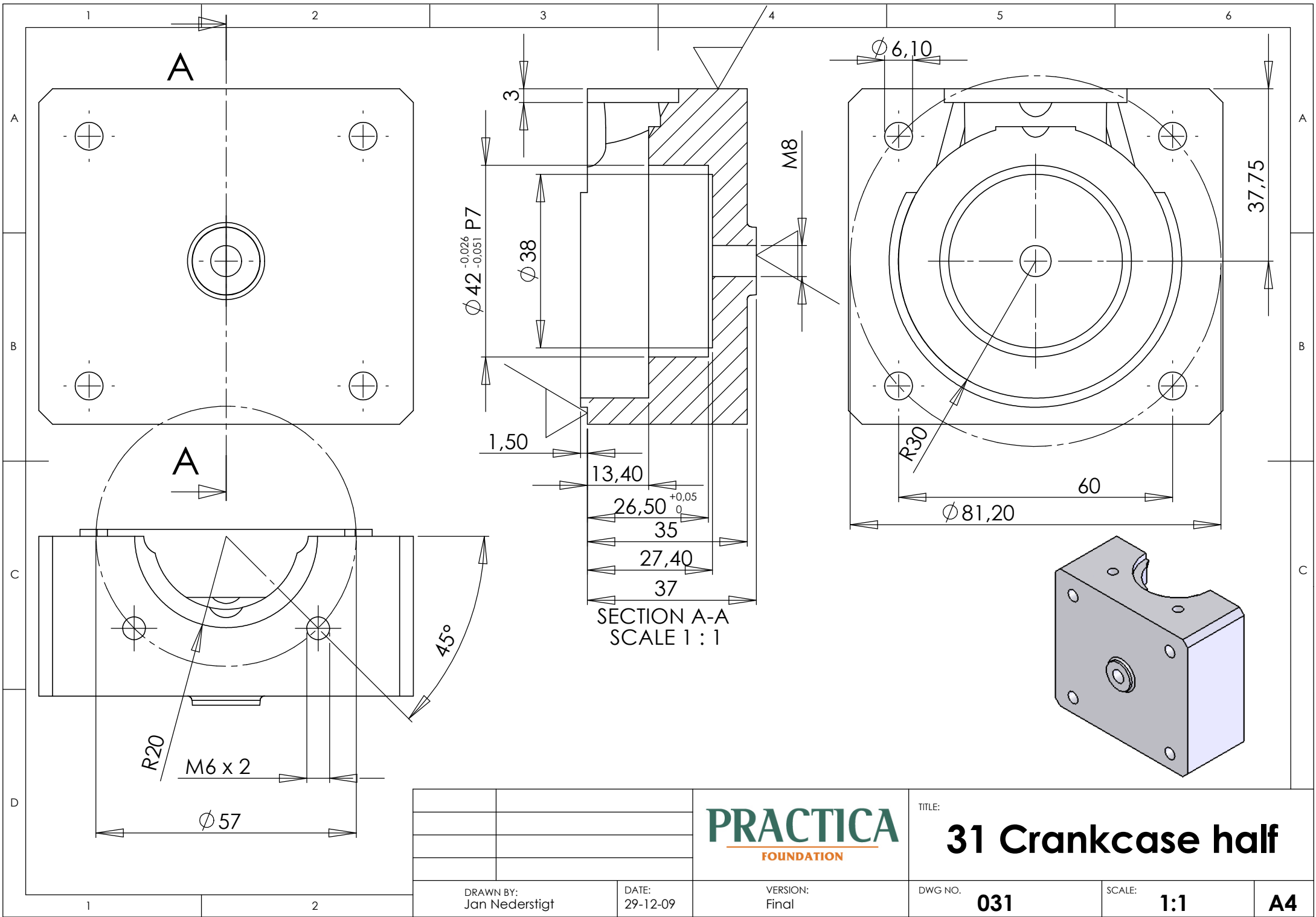
Part
Crankshaft assembly

PRACTICA
Foundation





Project Micro diesel drawing update	Designed by Jan Nederstigt	Version 1.0.1	Date 20-4-07	Scale 1:1	 PRACTICA Foundation
	Part Crankshaft				



PRACTICA
FOUNDATION

TITLE: **31 Crankcase half**

DRAWN BY:
Jan Nederstigt

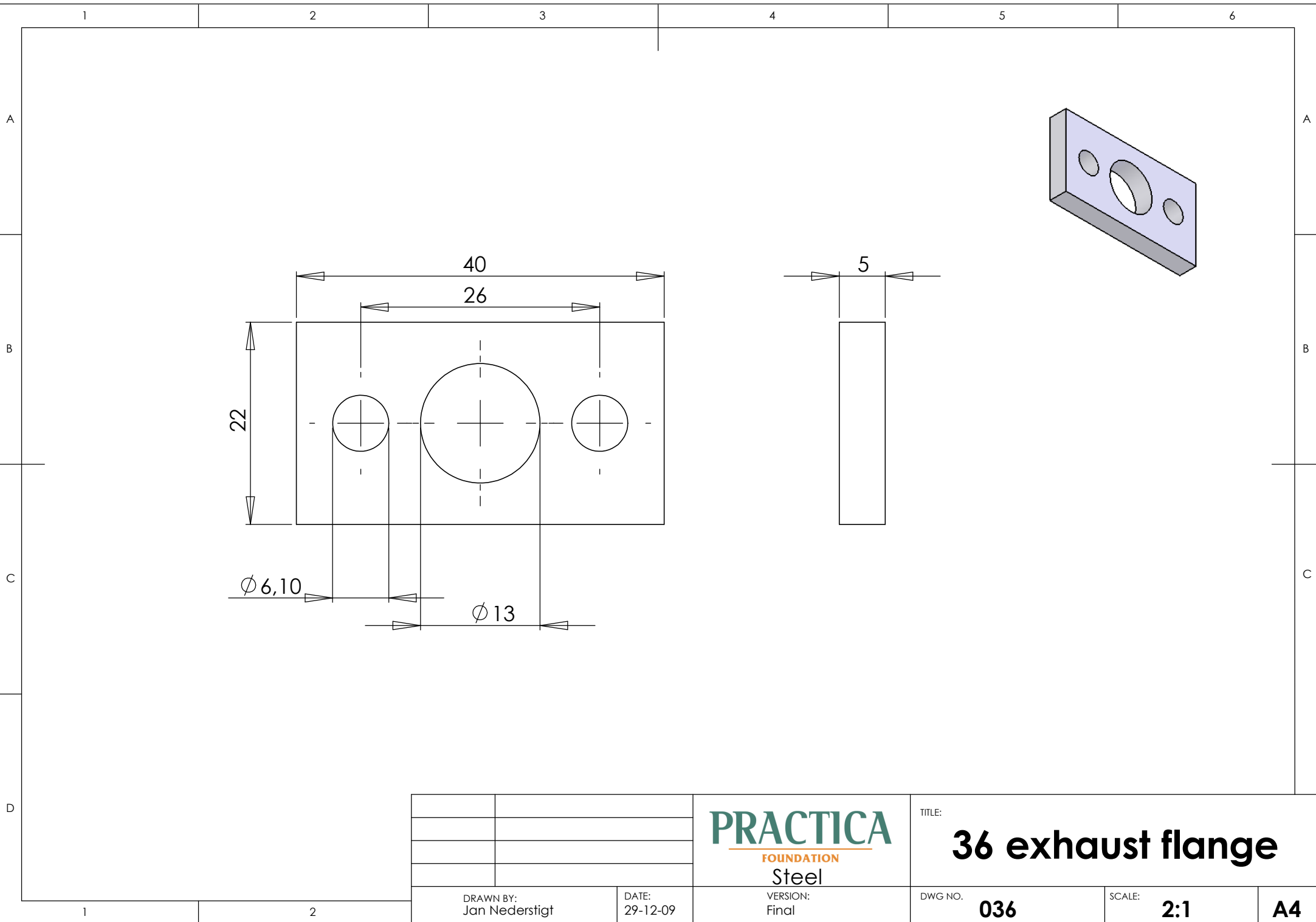
DATE:
29-12-09

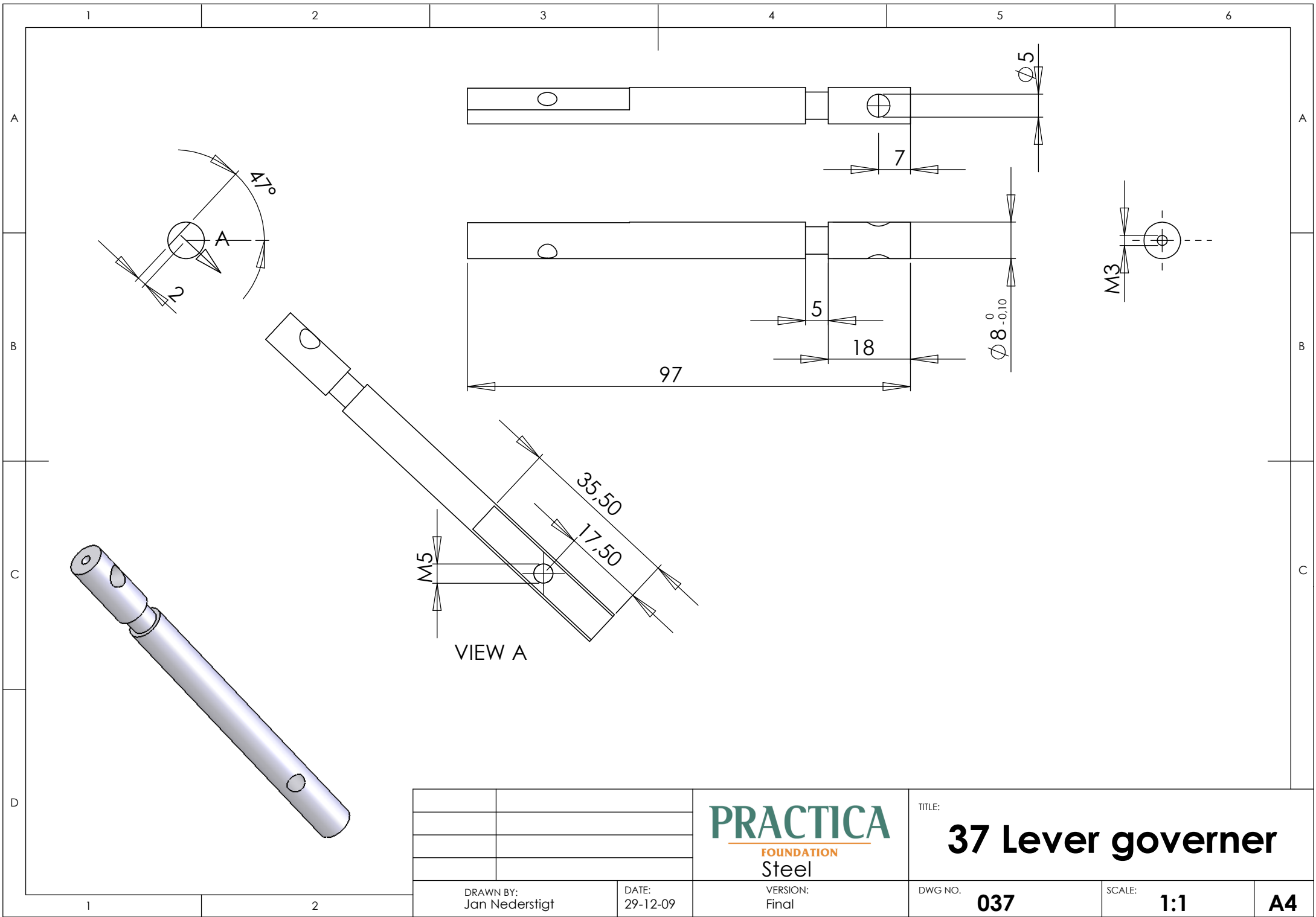
VERSION:
Final

DWG NO. **031**

SCALE: **1:1**

A4





DRAWN BY:
Jan Nederstigt

DATE:
29-12-09

PRACTICA
FOUNDATION
Steel

VERSION:
Final

TITLE:

37 Lever governor

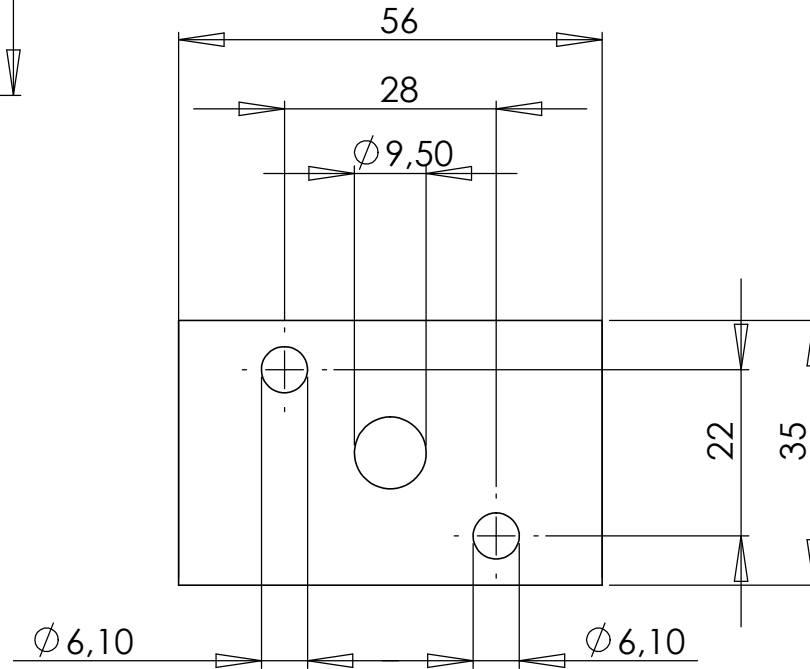
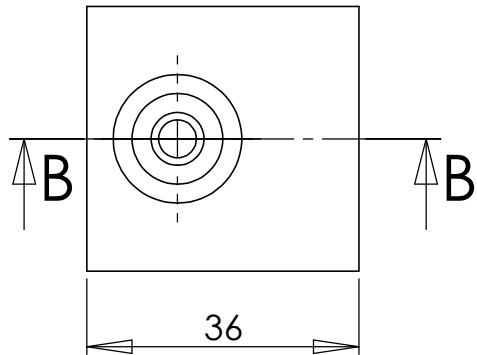
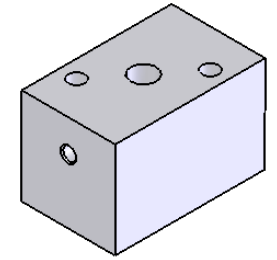
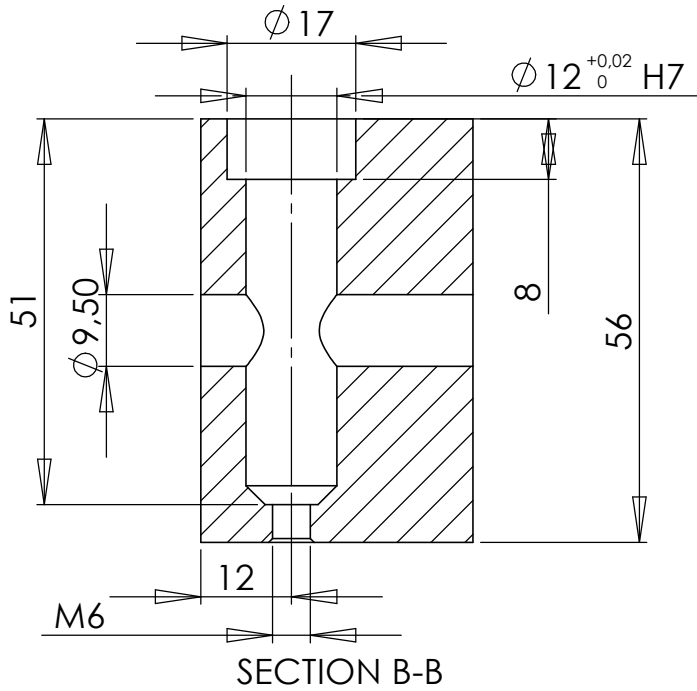
DWG NO.

037

SCALE:

1:1

A4



PRACTICA
FOUNDATION
AI

TITLE:

38 valve block

DRAWN BY:
Jan Nederstigt

DATE:
29-12-09

VERSION:
Final

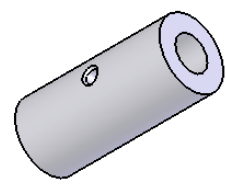
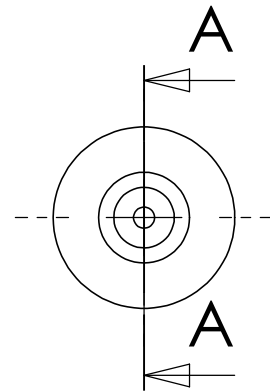
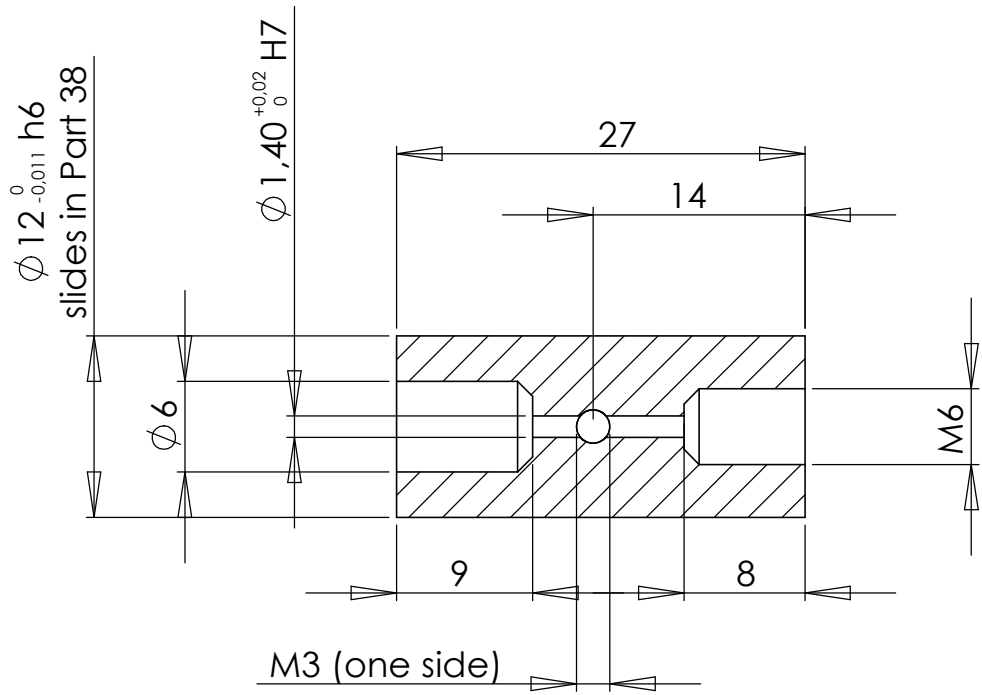
DWG NO.

038

SCALE:

1:1

A4

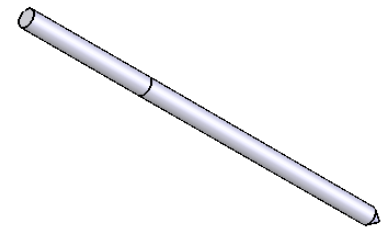
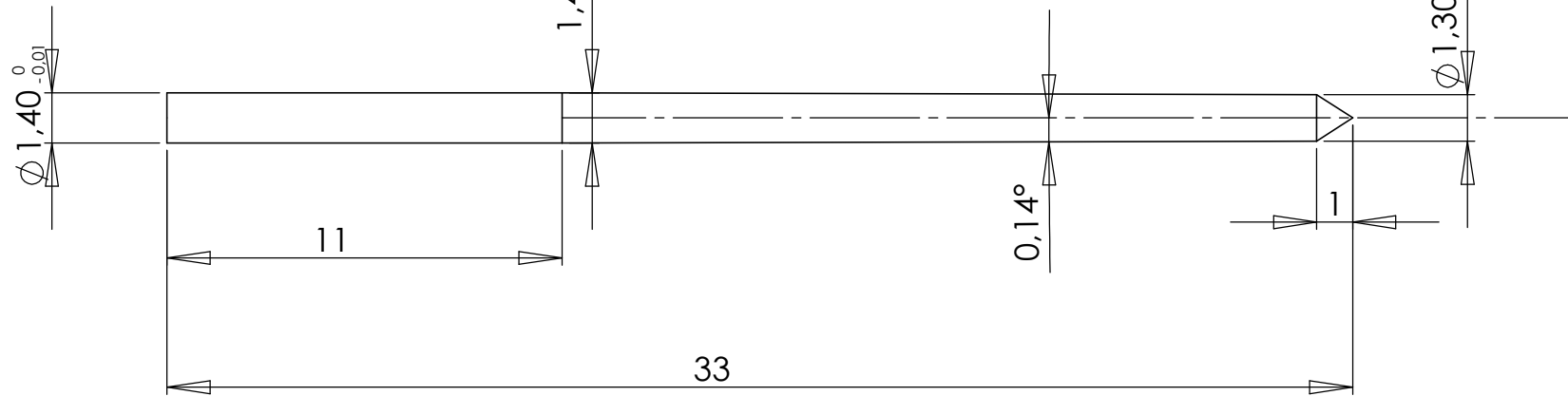


SECTION A-A

DRAWN BY: Jan Nederstigt	DATE: 29-12-09

PRACTICA
FOUNDATION

TITLE:	39 air valve		
DWG NO.	039	SCALE:	2:1
			A4



PRACTICA
FOUNDATION

TITLE: **40 needle valve**

DRAWN BY:
Jan Nederstigt

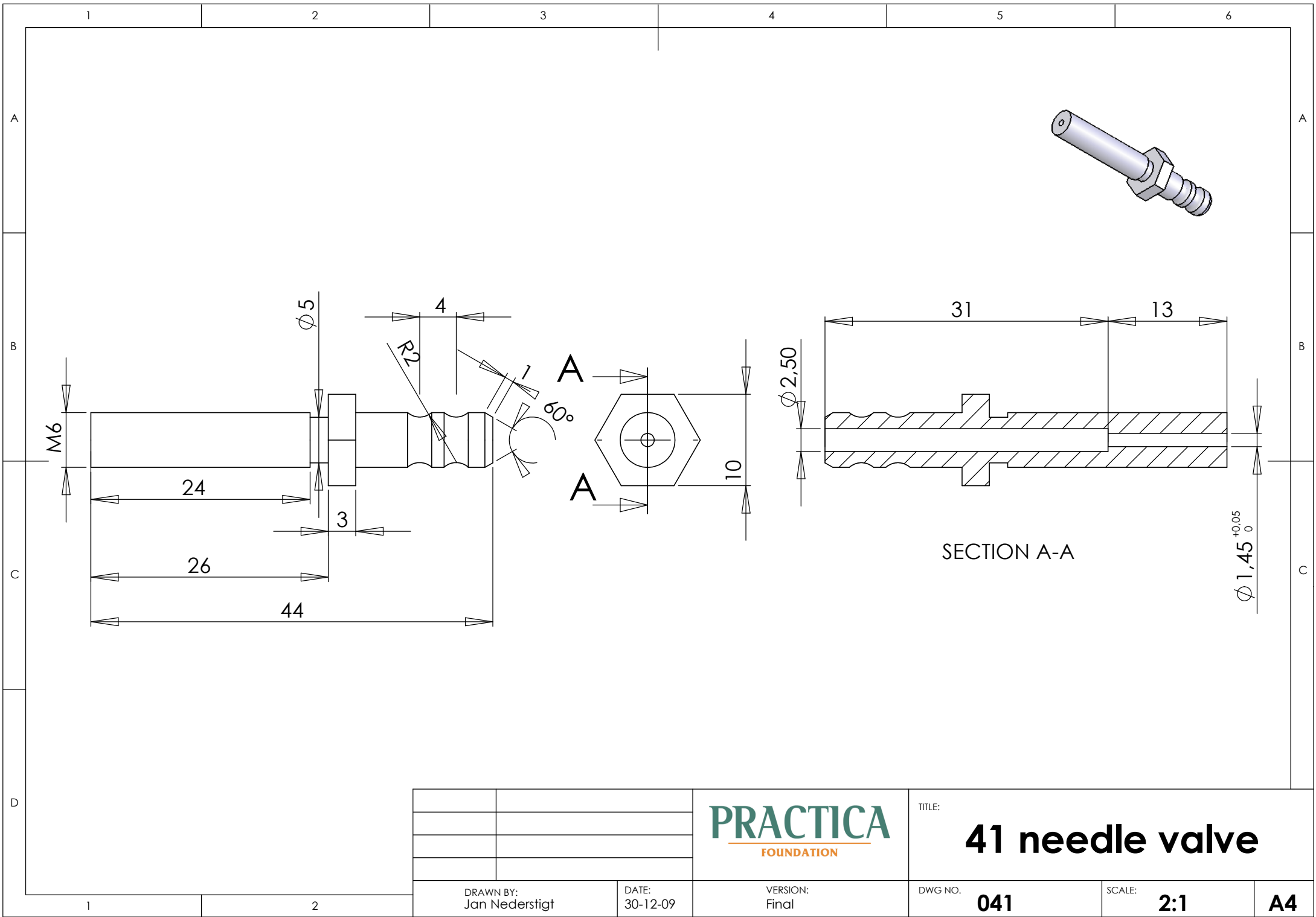
DATE:
30-12-09

VERSION:
Final

DWG NO. **040**

SCALE: **5:1**

A4





TITLE: **41 needle valve**

DRAWN BY:
Jan Nederstigt

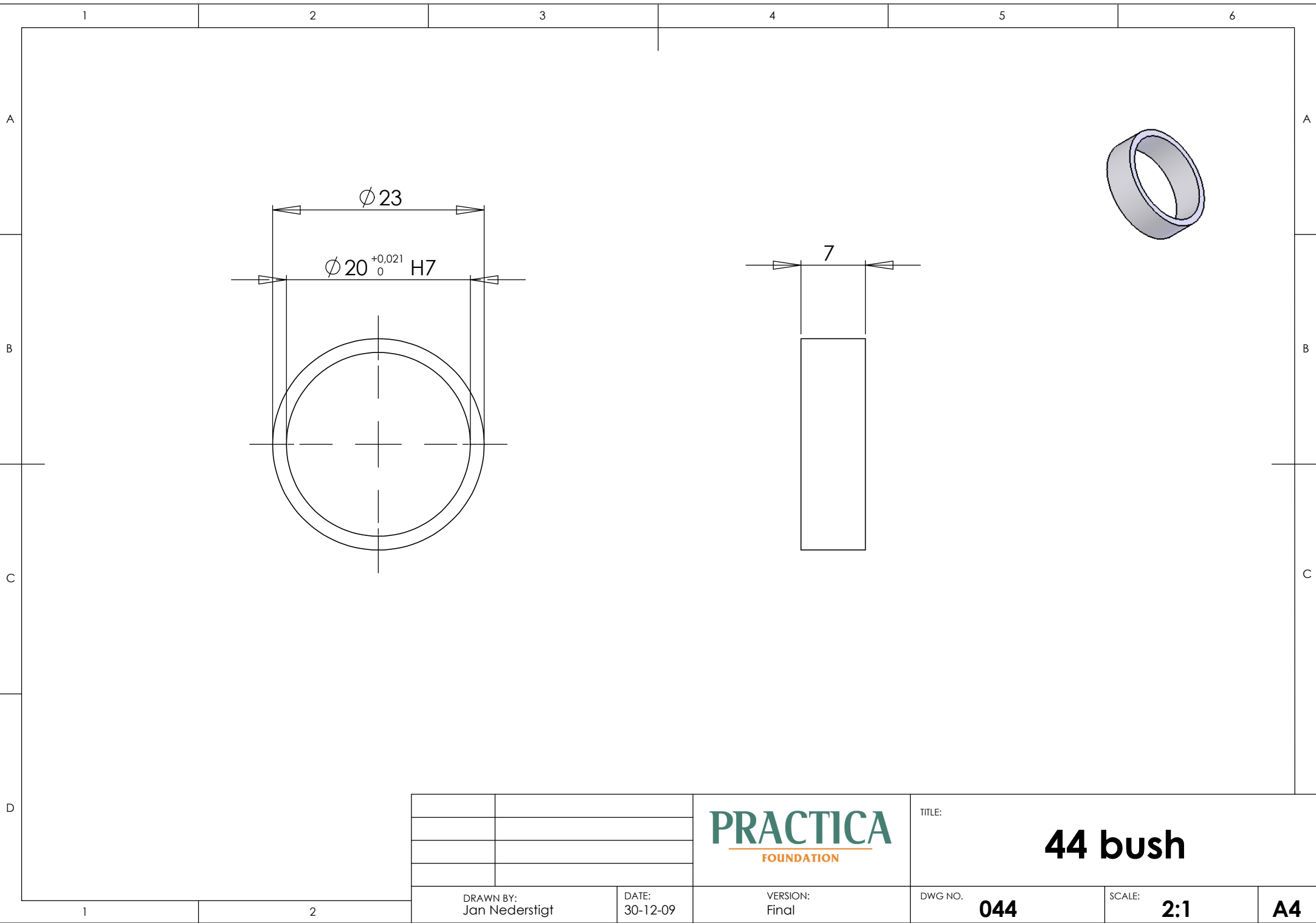
DATE:
30-12-09

VERSION:
Final

DWG NO. **041**

SCALE: **2:1**

A4





TITLE: **44 bush**

DRAWN BY:
Jan Nederstigt

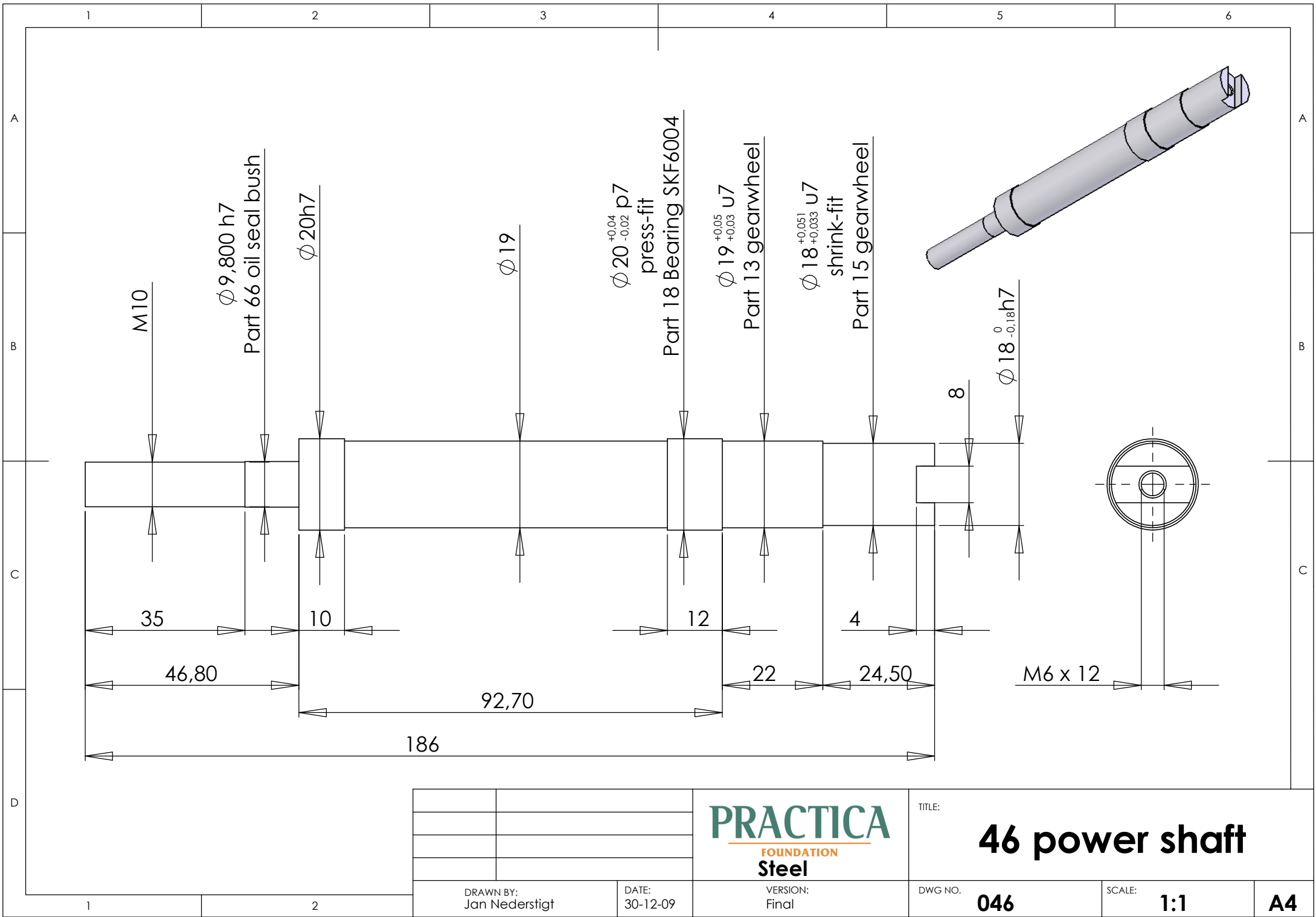
DATE:
30-12-09

VERSION:
Final

DWG NO. **044**

SCALE: **2:1**

A4



PRACTICA
FOUNDATION
Steel

TITLE: **46 power shaft**

DRAWN BY:
Jan Nederstigt

DATE:
30-12-09

VERSION:
Final

DWG NO. **046**

SCALE: **1:1**

A4

1 2 3 4 5 6

A

A

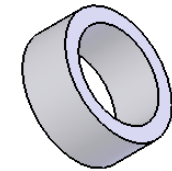
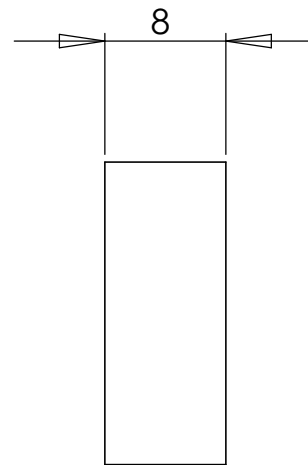
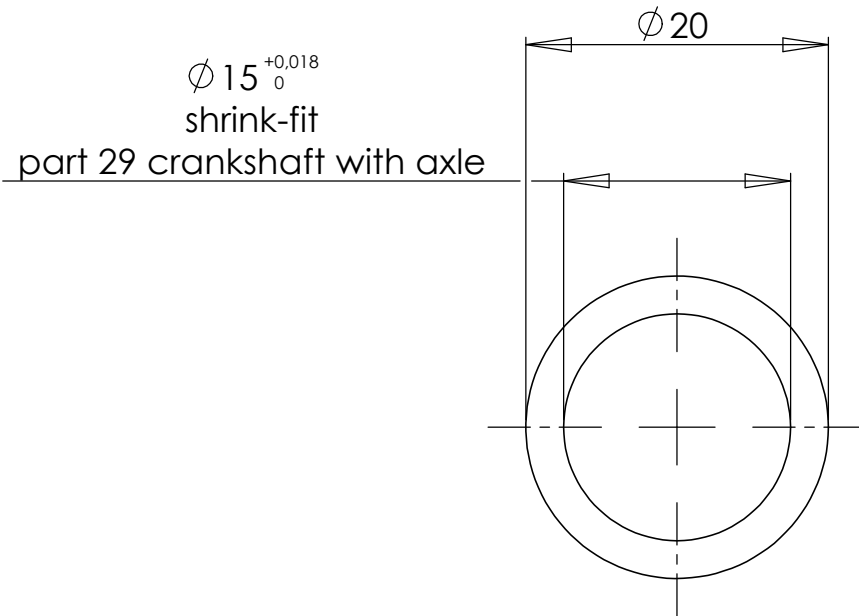
B

B

C

C

D



PRACTICA
FOUNDATION

TITLE:

47 steel sleeve

DRAWN BY:
Jan Nederstigt

DATE:
30-12-09

VERSION:
Final

DWG NO.

047

SCALE:

2:1

A4

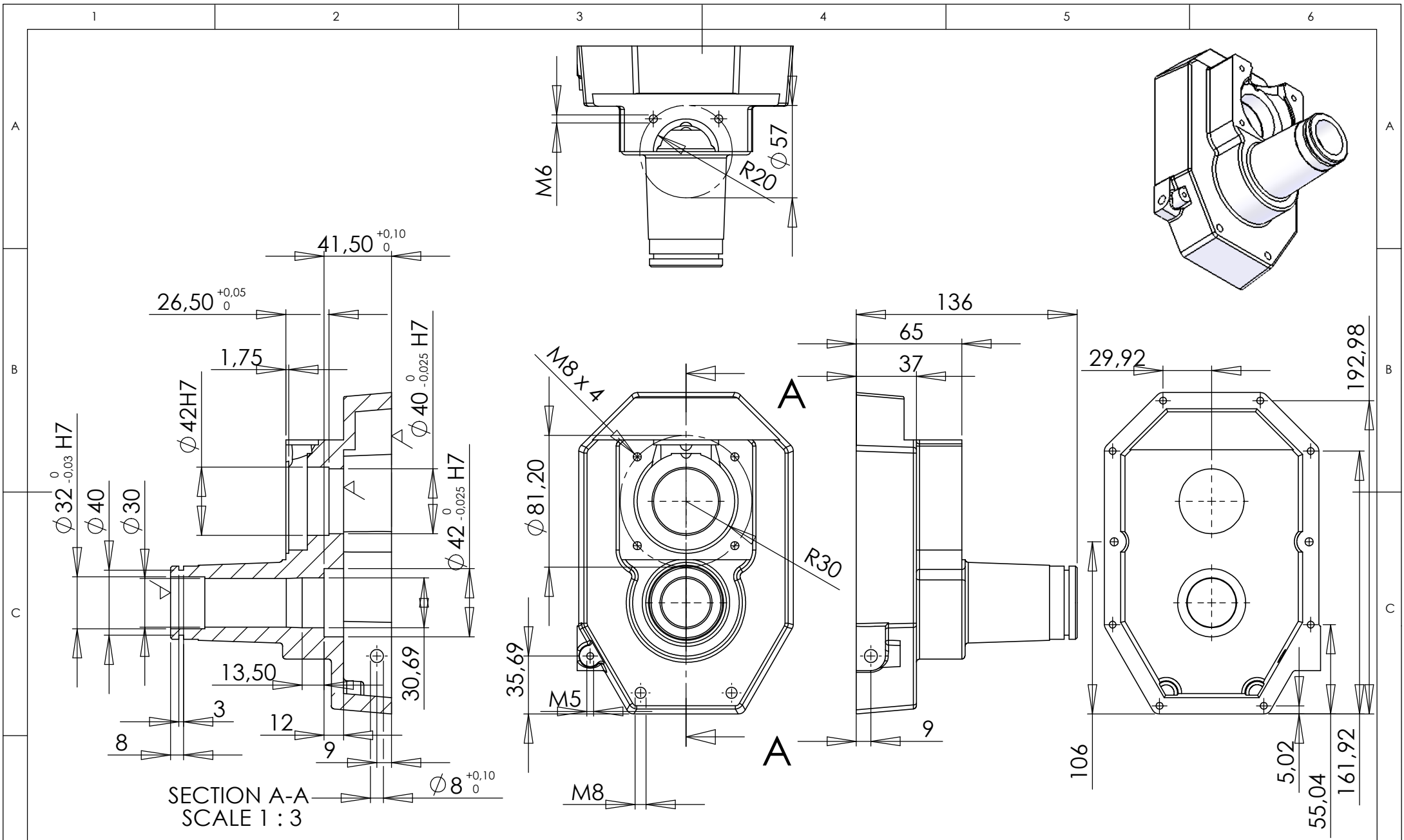
1

2

$\phi 15^{+0.018}_0$
shrink-fit
part 29 crankshaft with axle

$\phi 20$

8

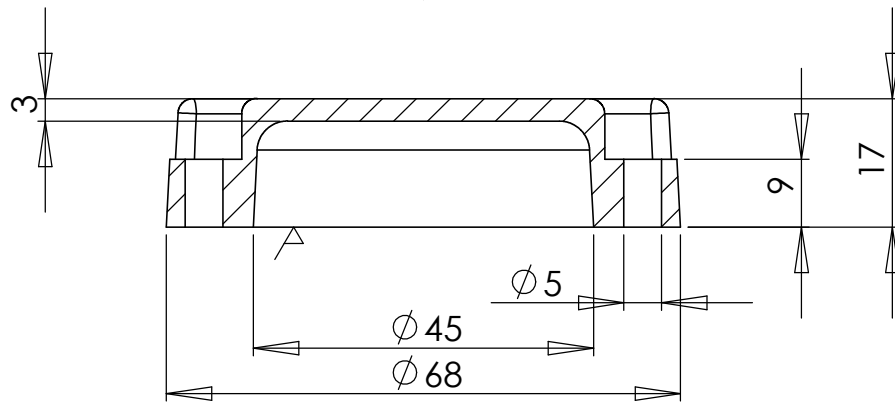
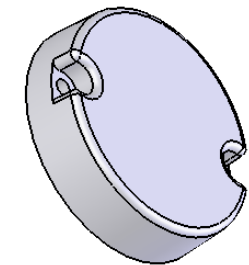
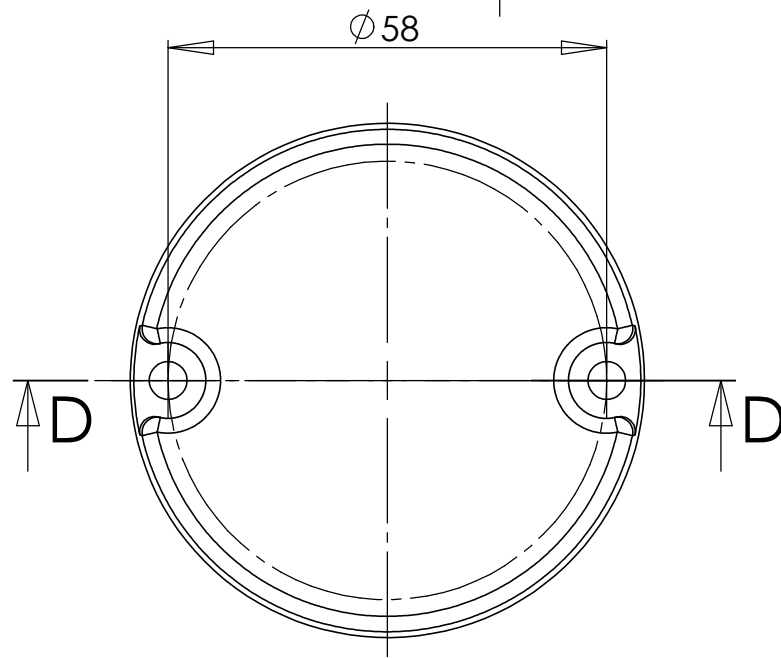


DRAWN BY: Jan Nederstigt	DATE: 17-12-2009

PRACTICA
FOUNDATION

VERSION:
Final

TITLE: 49 Gearbox		
DWG NO. 049	SCALE: 1:3	A4



SECTION D-D

PRACTICA
FOUNDATION

TITLE:
50 governer cover

DRAWN BY:
Jan Nederstigt

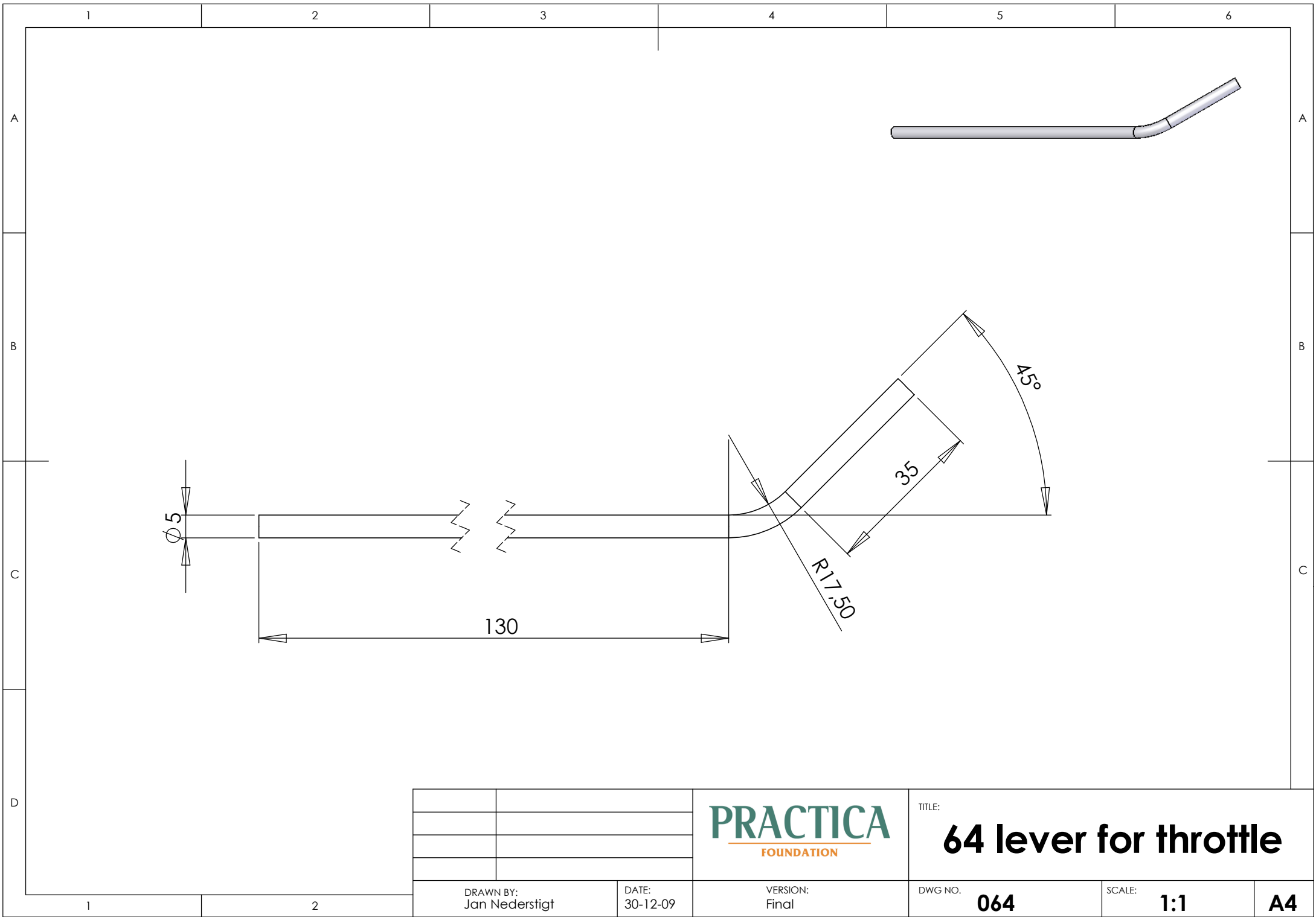
DATE:
30-12-09

VERSION:
Final

DWG NO. **050**

SCALE: **1:1**

A4



PRACTICA
FOUNDATION

TITLE:
64 lever for throttle

DRAWN BY:
Jan Nederstigt

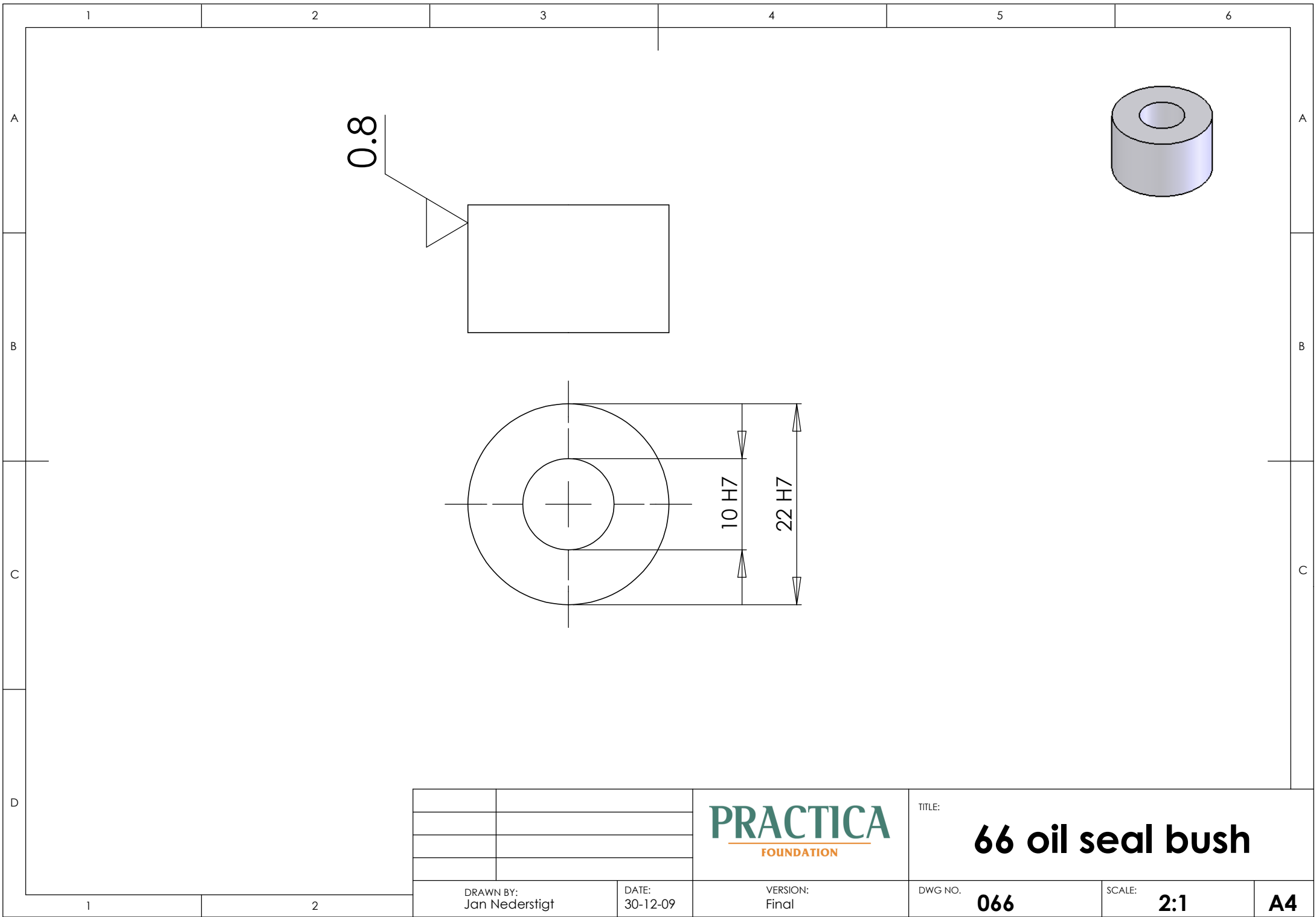
DATE:
30-12-09

VERSION:
Final

DWG NO.
064

SCALE:
1:1

A4





TITLE: **66 oil seal bush**

DRAWN BY:
Jan Nederstigt

DATE:
30-12-09

VERSION:
Final

DWG NO. **066**

SCALE: **2:1**

A4