

Pacer Turbines Ltd

project  
PTB - Pacer Turbine

part | assembly  
pacer

quantity (per unit)

materials

finish

notes

drawn by  
**MH** 19/04/2011  
sheet  
**1 of 18** scale  
1:5 @ A3  
ALL DIMENSIONS ARE IN mm

drawing  
**001-PTB-PACER**  
CAD file  
**pacer**  
file  
**Pacer Turbine**  
revision

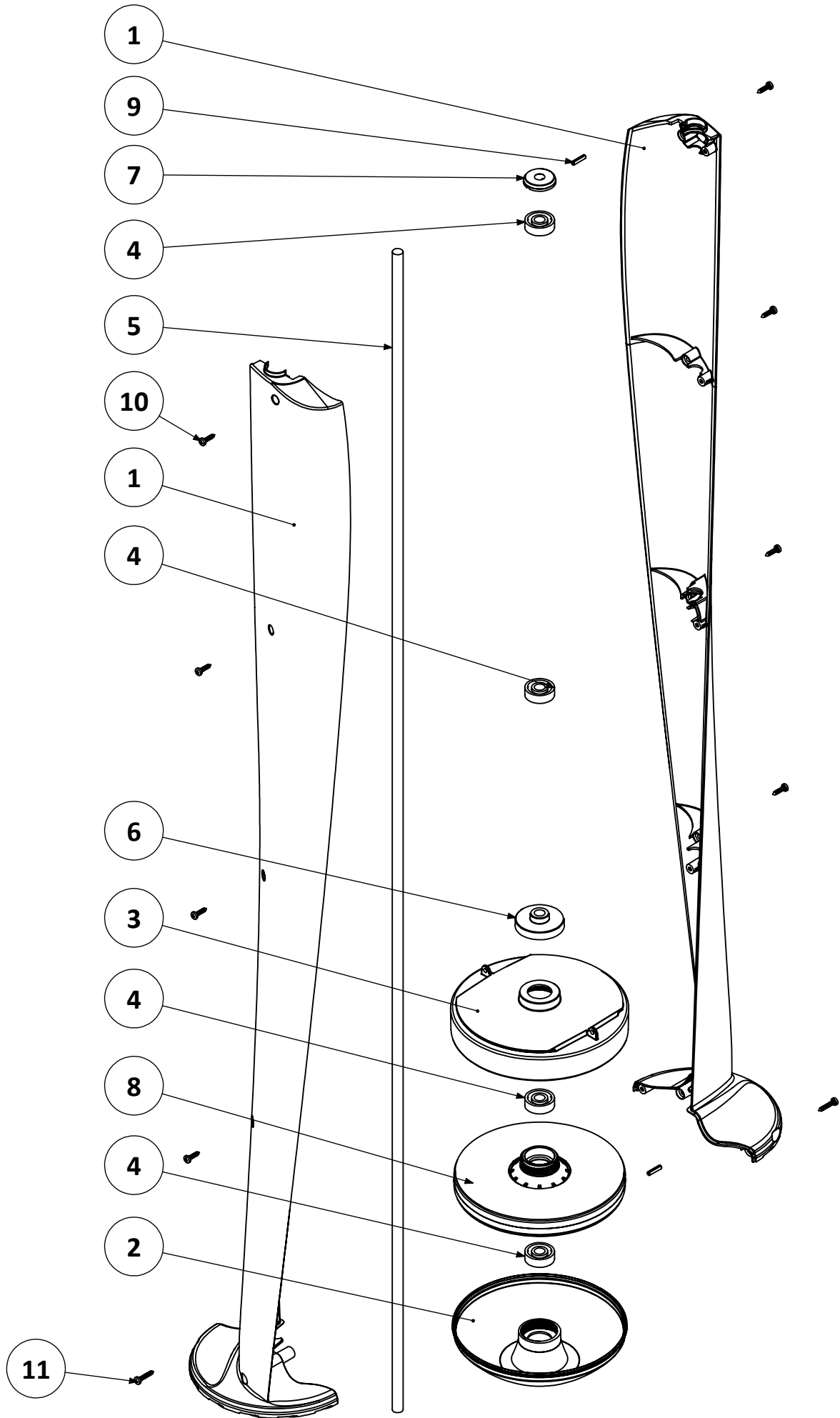
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#	Name	Drawing	QTY
1	Blade	002-PTB-PACER	2
2	Generator Bottom	003-PTB-PACER	1
3	Generator Top	004-PTB-PACER	1
4	Bearing	005-PTB-PACER	4
5	Shaft	006-PTB-PACER	1
6	Generator Bearing Seal	007-PTB-PACER	1
7	Top Bearing Seal	008-PTB-PACER	1
8	Generator	009-PTB-PACER	1
9	M3x13 Bissell Pin	N/A	2
10	ST2.9x12 Pan Self Tapper	N/A	8
11	ST2.9x16 Pan Self Tapper	N/A	4



Pacer Turbines Ltd

project  
PTB - Pacer Turbine

part | assembly  
pacer

quantity (per unit)

materials

finish

notes

drawn by  
**MH**

19/04/2011

sheet  
**2 of 18**

scale  
**1:4 @ A3**

ALL DIMENSIONS ARE IN mm

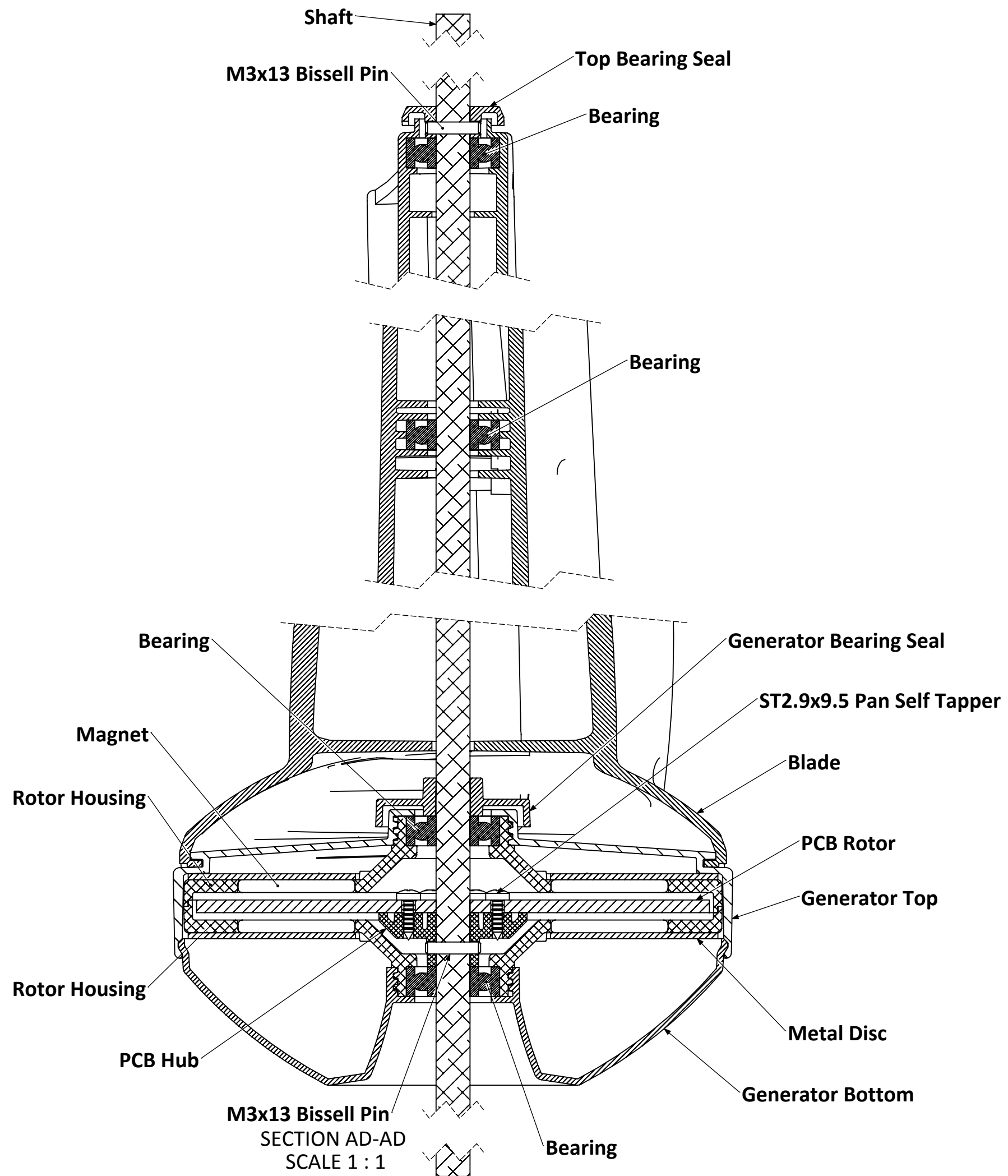
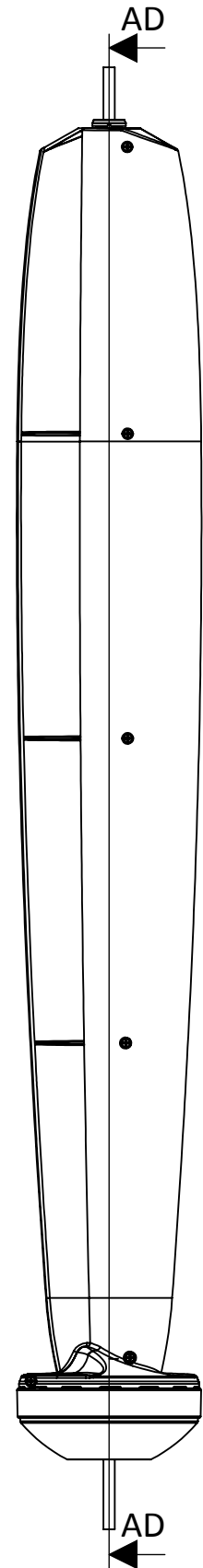
drawing  
**001-PTB-PACER**  
CAD file  
**pacer**  
file  
**Pacer Turbine**  
revision

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project  
PTB - Pacer Turbine

part | assembly  
pacer

quantity (per unit)

materials

finish

notes

drawn by  
**MH** 19/04/2011  
sheet scale  
3 of 18 1:4 @ A3  
ALL DIMENSIONS ARE IN mm

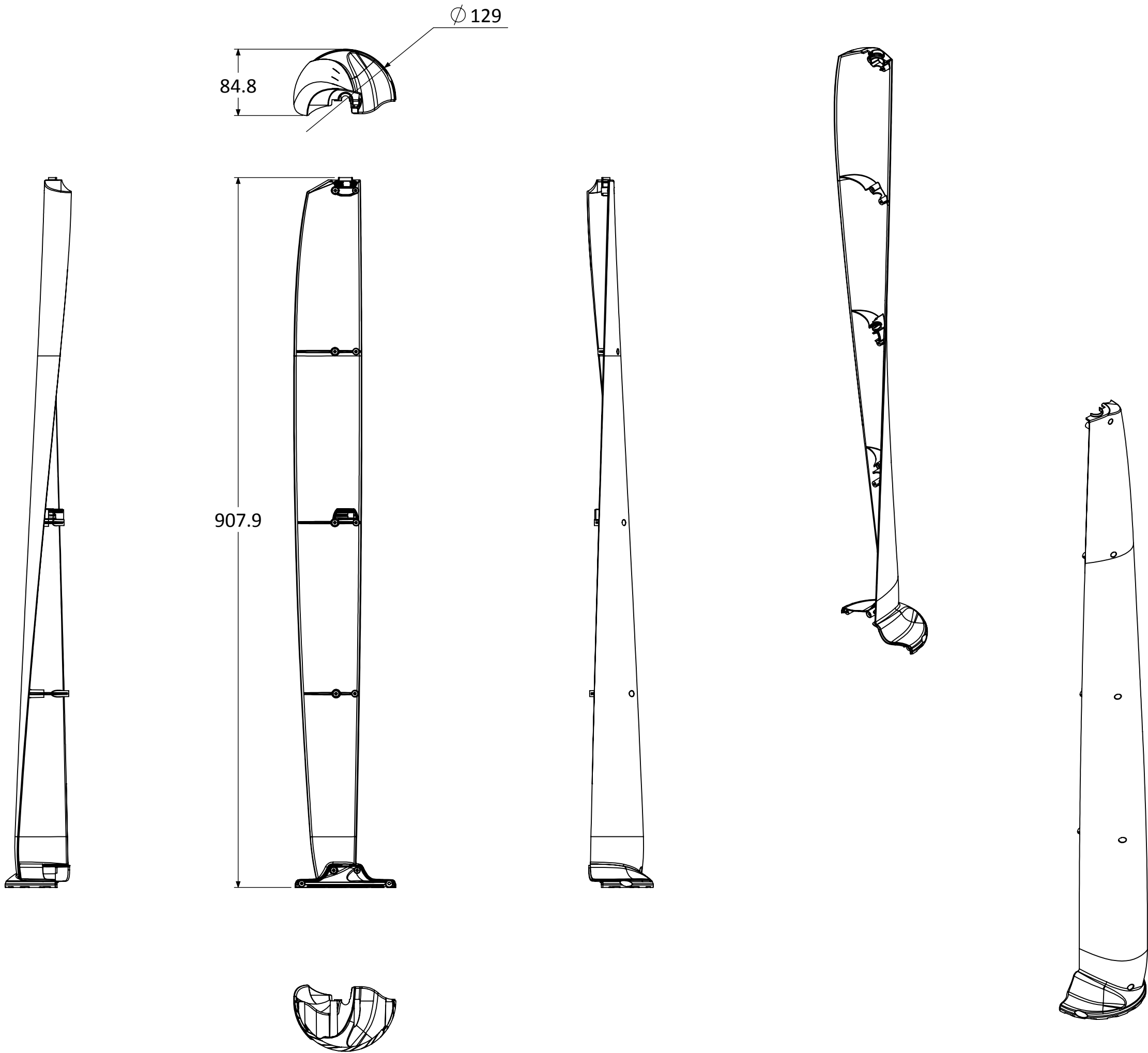
drawing  
001-PTB-PACER  
CAD file  
pacer  
file  
Pacer Turbine  
revision

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Pacer Turbines Ltd

project  
PTB - Pacer Turbine

part | assembly  
Blade

quantity (per unit)  
2

materials  
ABS (UV Stabilized)

finish  
Light EDM

notes  
Dimensions Informational Only  
Parts should be produced by  
CNC from CAD Models.

drawn by  
MH  
sheet  
4 of 18  
19/04/2011  
scale  
1:5 @ A3  
ALL DIMENSIONS ARE IN mm

drawing  
002-PTB-PACER  
CAD file  
blade\_2011  
file  
Pacer Turbine  
revision

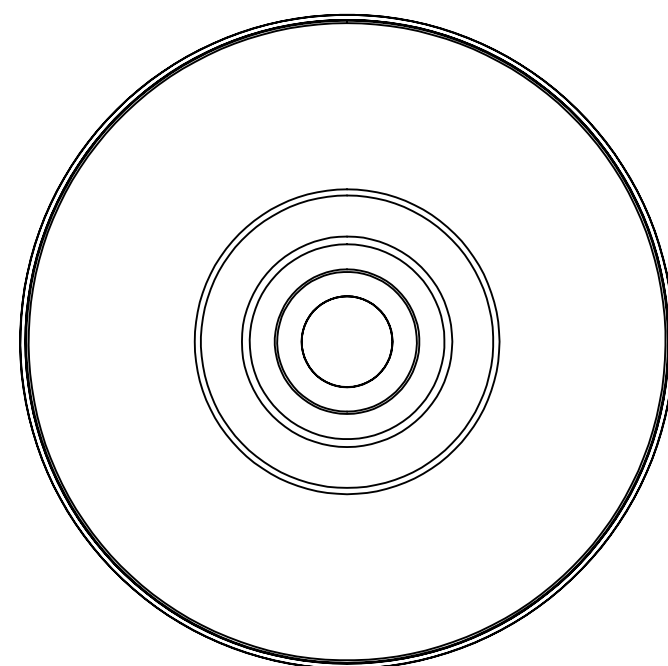
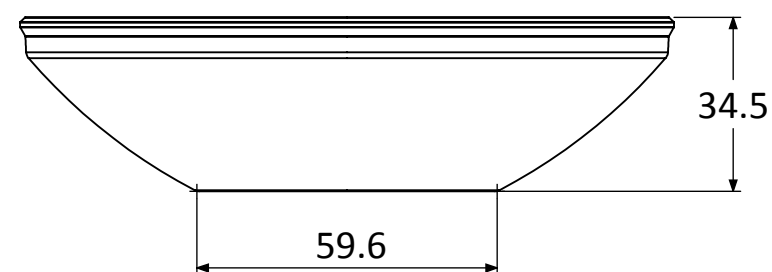
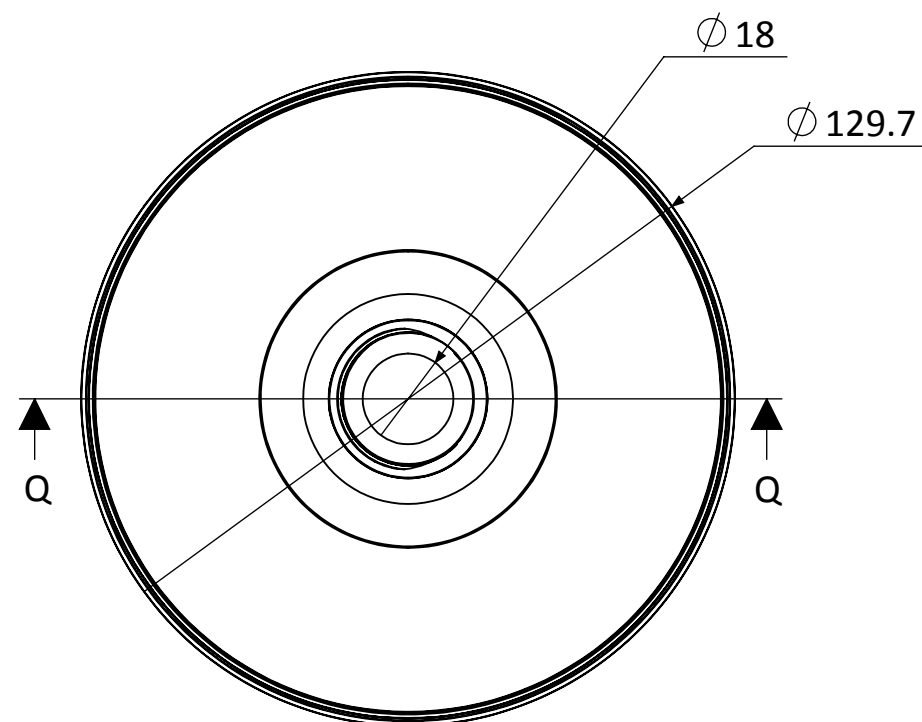
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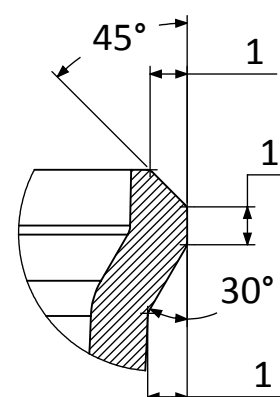
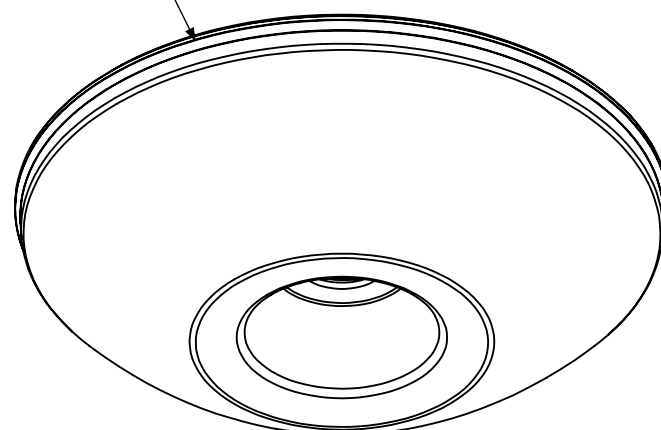
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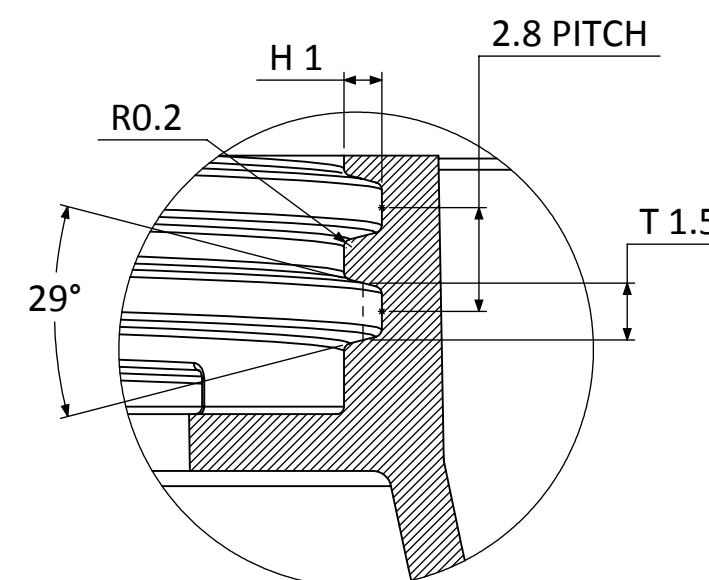
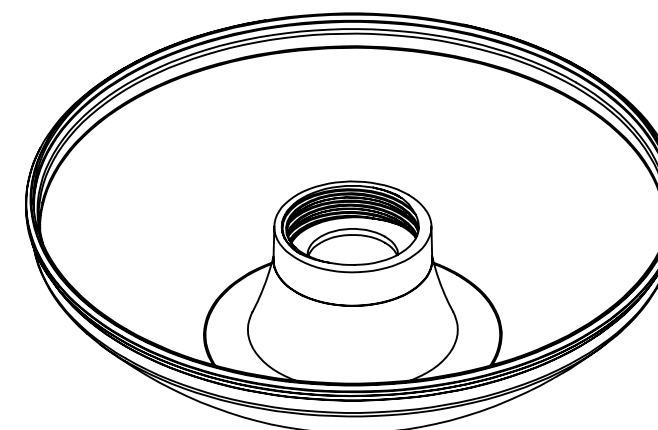




Detachable  
Annular Snap Ring

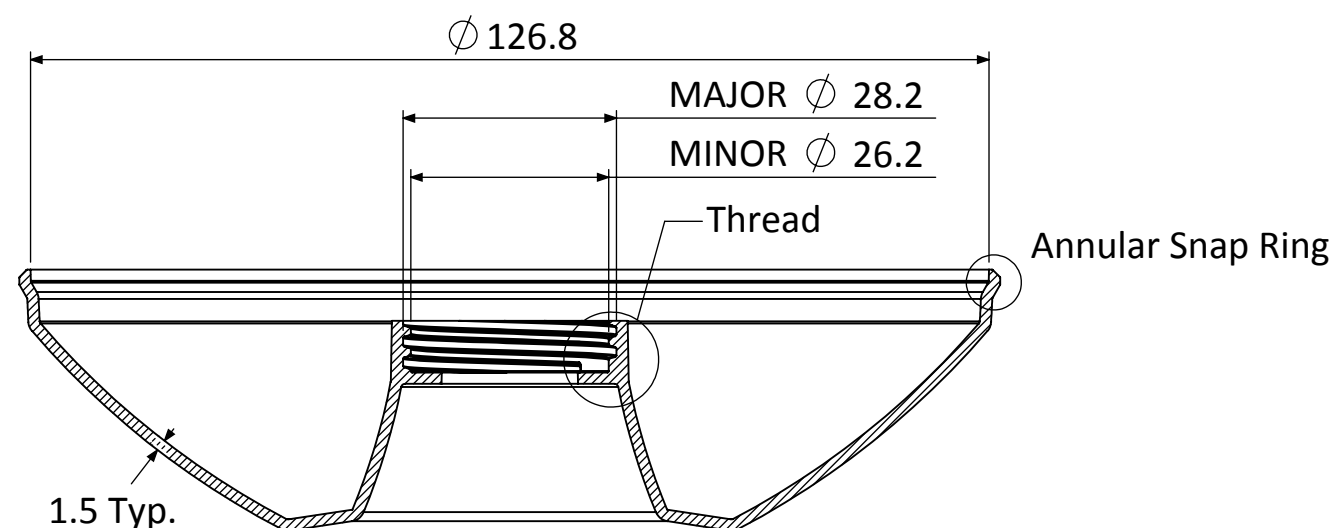


DETAIL Annular Snap Ring  
SCALE 5 : 1



DETAIL Thread  
SCALE 5 : 1

Modified ACME Thread used on all threads



SECTION Q-Q  
SCALE 1 : 1

Pacer Turbines Ltd

project  
PTB - Pacer Turbine

part | assembly  
Generator Bottom

quantity (per unit)  
1

materials

finish

notes  
Dimensions Informational Only  
Parts should be produced by  
CNC from CAD Models.

drawn by  
MH  
sheet  
6 of 18  
19/04/2011  
scale  
2:3 @ A3  
ALL DIMENSIONS ARE IN mm

drawing  
003-PTB-PACER  
CAD file  
Generator Bottom  
file  
Pacer Turbine  
revision

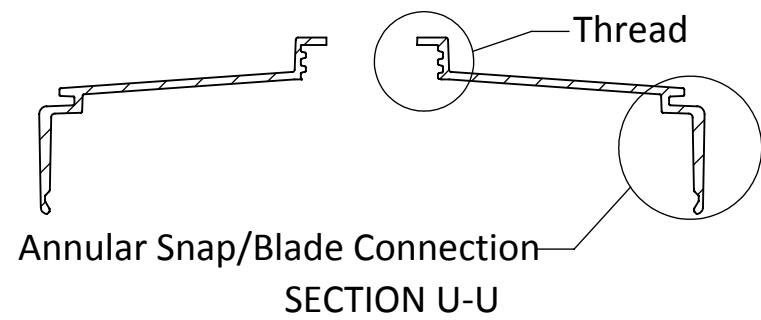
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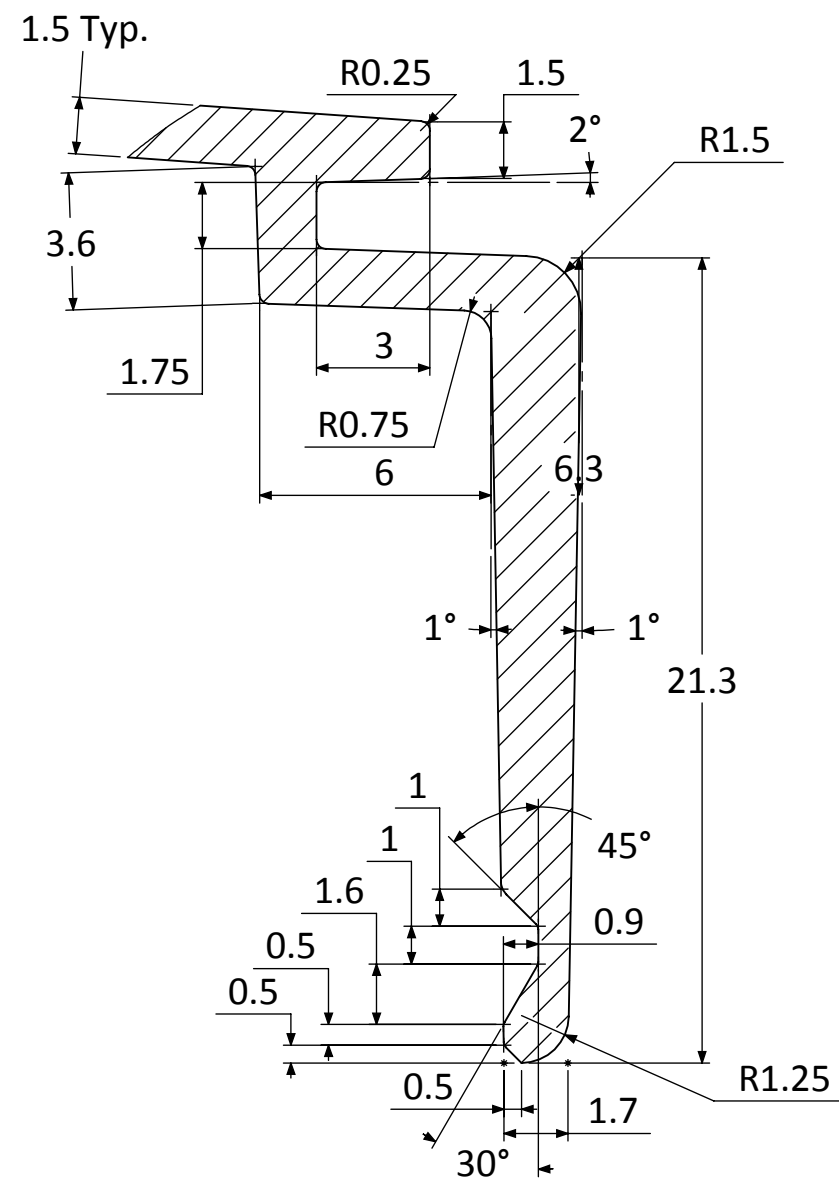




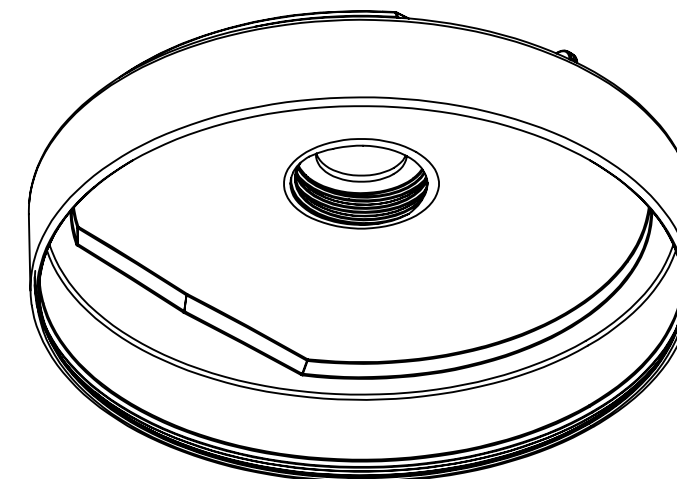
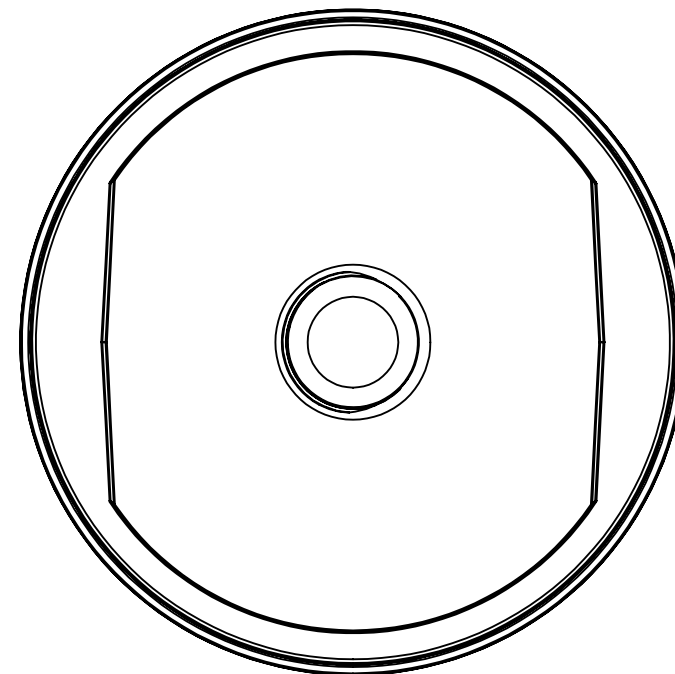
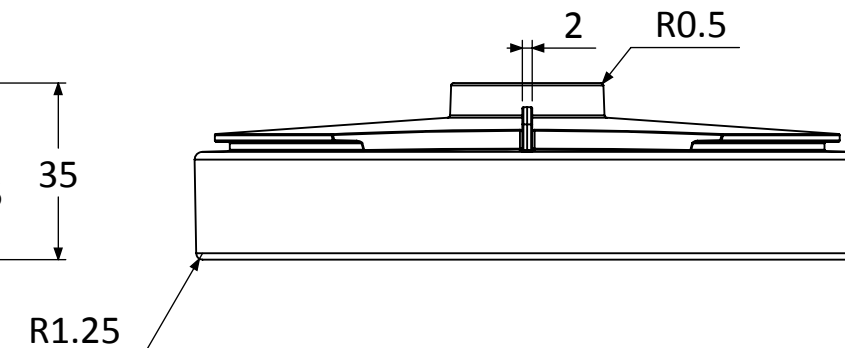
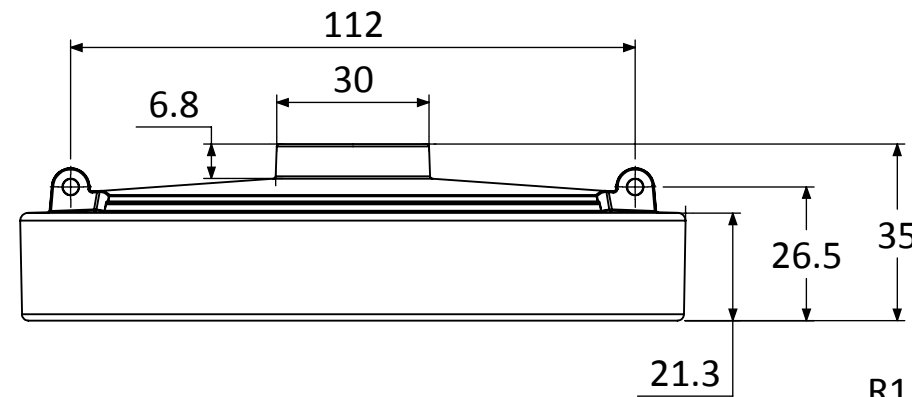
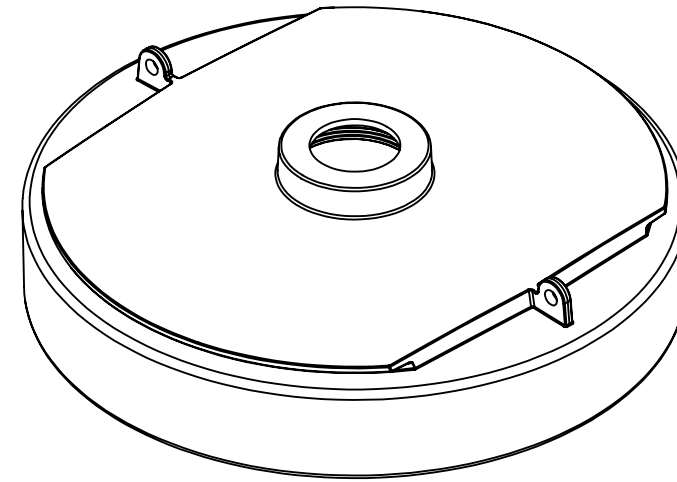
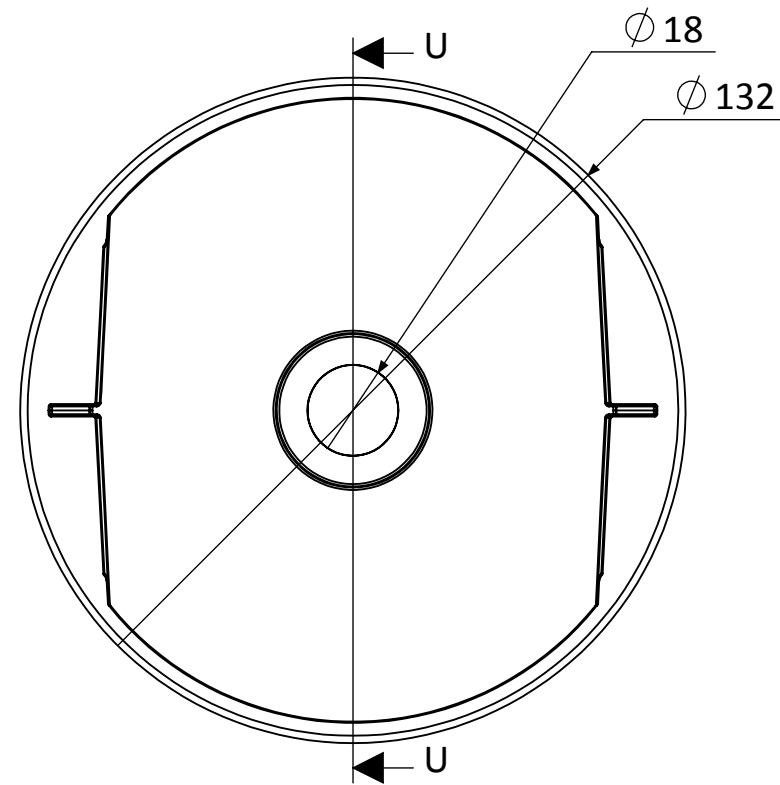


Modified ACME Thread  
used on all threads  
Ref: 003-PTB-PACER

DETAIL Thread  
SCALE 5 : 1



DETAIL Annular Snap/Blade Connection  
SCALE 5 : 1



Pacer Turbines Ltd

project  
PTB - Pacer Turbine

part | assembly  
Generator Top

quantity (per unit)  
1

materials

finish

notes  
Dimensions Informational Only  
Parts should be produced by  
CNC from CAD Models.

drawn by  
MH  
sheet  
7 of 18  
19/04/2011  
scale  
2:3 @ A3  
ALL DIMENSIONS ARE IN mm

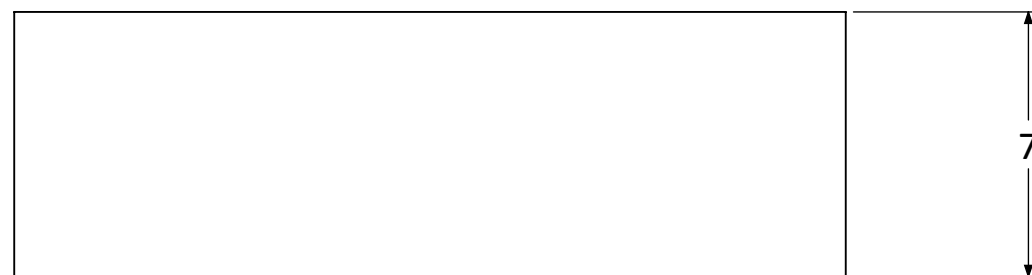
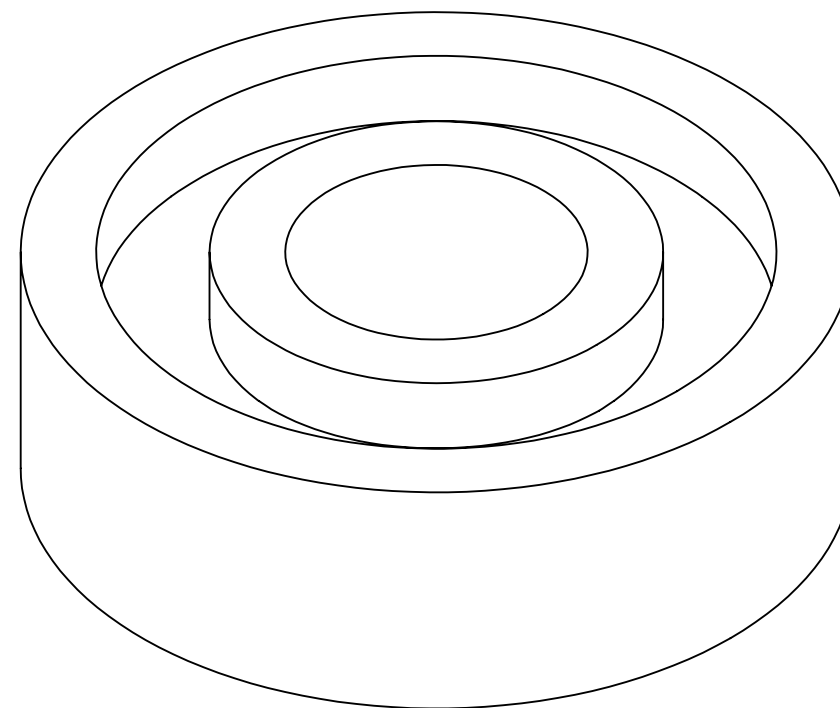
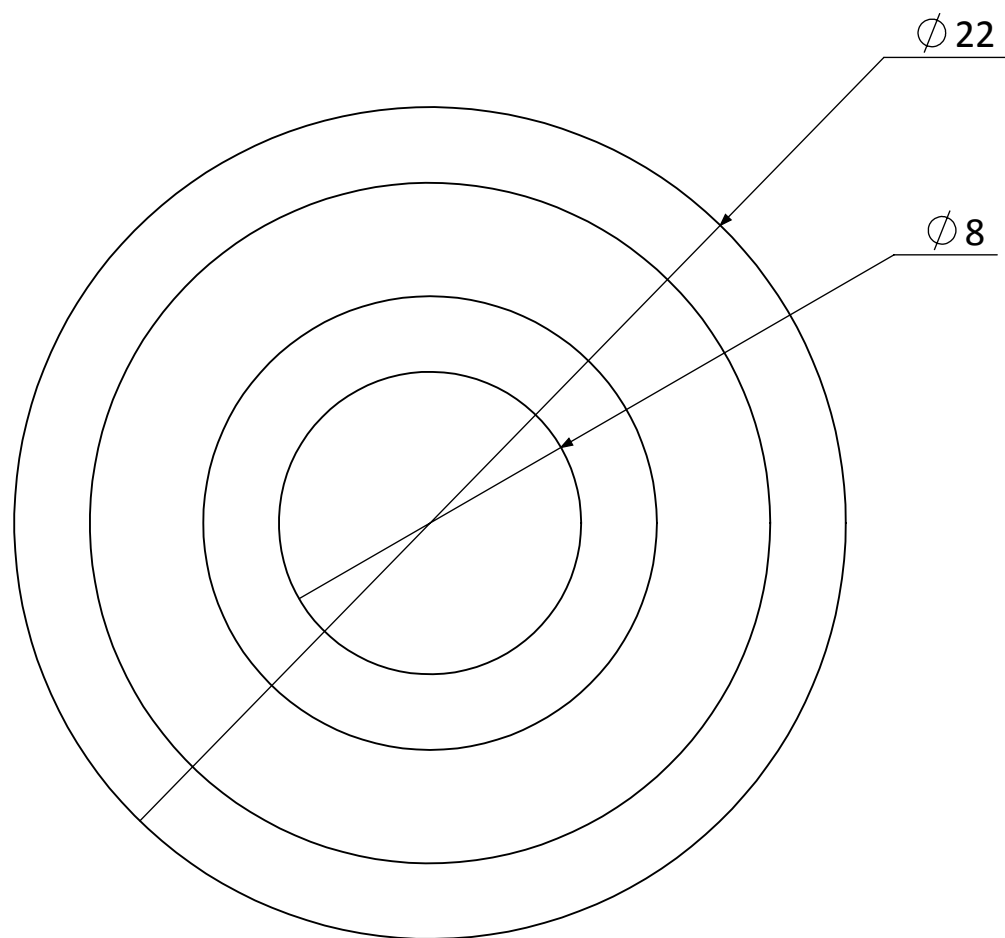
drawing  
004-PTB-PACER  
CAD file  
Generator Top  
file  
Pacer Turbine  
revision

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Pacer Turbines Ltd

project  
PTB - Pacer Turbine

part | assembly  
Bearing

quantity (per unit)  
4

materials  
Standard Skate Bearing

finish

notes

drawn by  
MH  
sheet  
8 of 18  
19/04/2011  
scale  
5:1 @ A3

ALL DIMENSIONS ARE IN mm

drawing  
005-PTB-PACER  
CAD file  
skate\_bearing  
file  
Pacer Turbine  
revision

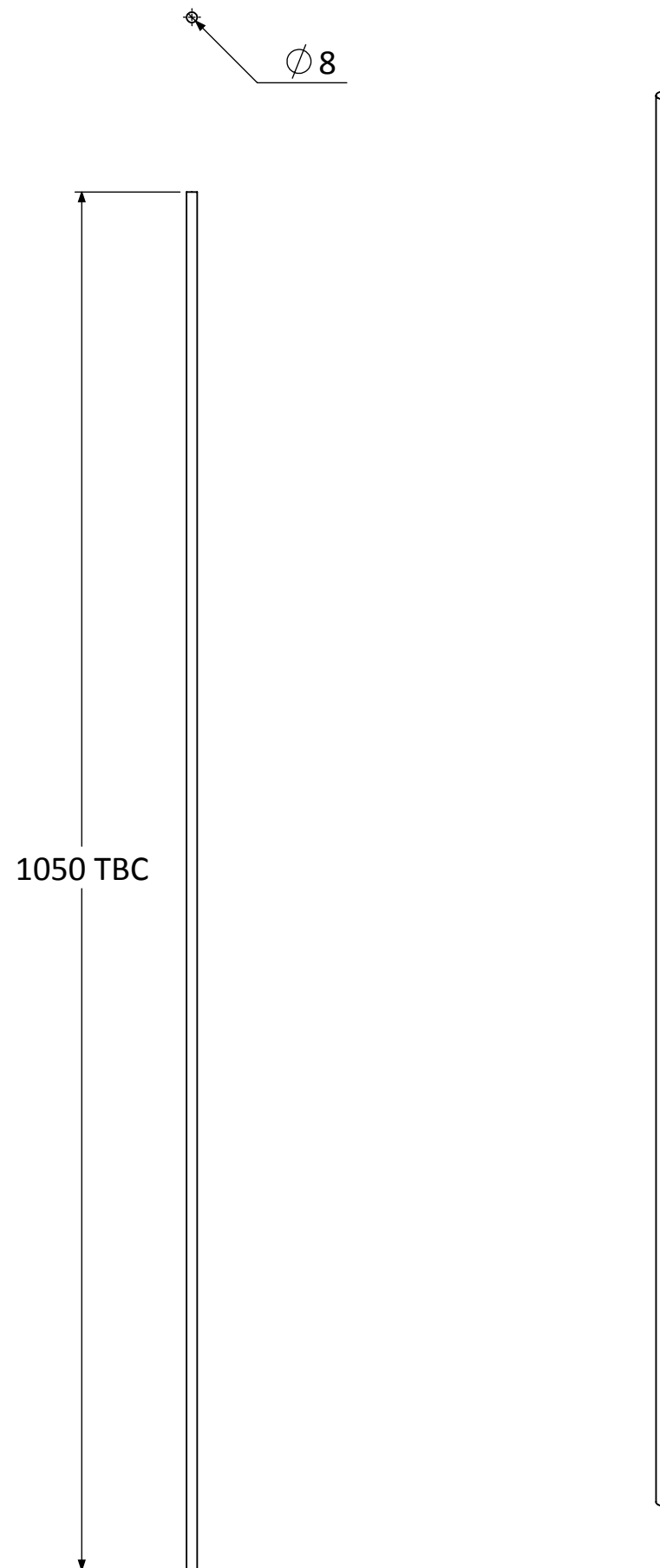
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Pacer Turbines Ltd

project  
**PTB - Pacer Turbine**

part | assembly  
**Shaft**

quantity (per unit)  
**1**

materials  
**Carbon Fibre/Fibreglass  
Pulltrusion TBC**

finish

notes

drawn by  
**MH**  
sheet  
**9 of 18**

**19/04/2011**  
scale  
**1:5 @ A3**

**ALL DIMENSIONS ARE IN mm**

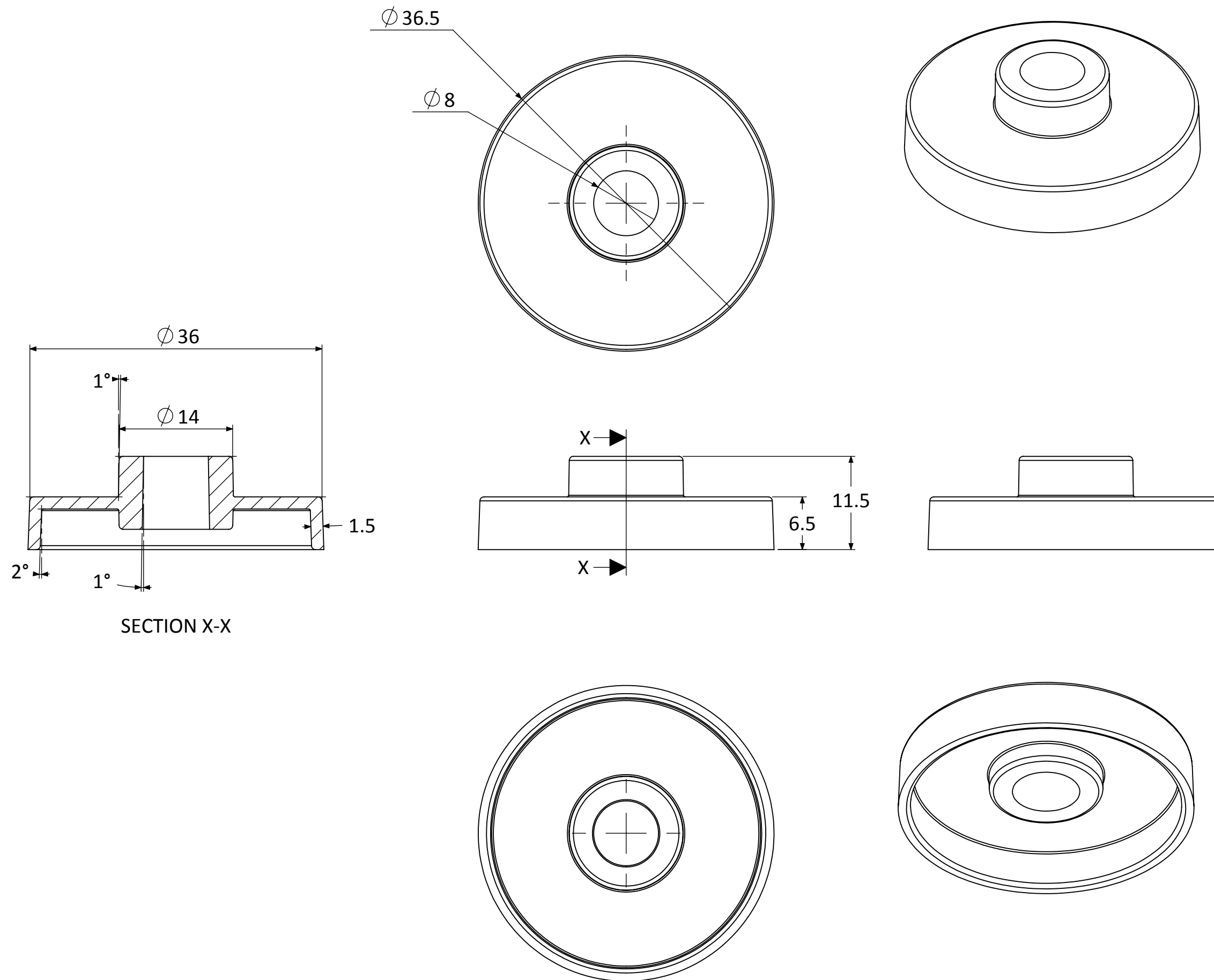
drawing  
**006-PTB-PACER**  
CAD file  
**shaft**  
file  
**Pacer Turbine**  
revision

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Pacer Turbines Ltd

project  
**PTB - Pacer Turbine**

part | assembly  
**Generator Bearing Seal**

quantity (per unit)  
**1**

materials

finish

notes  
**The connection to the Shaft has not been resolved yet. Friction should be enough to hold this part in place depending on the shaft material.**

**Dimensions Informational Only**  
**Parts should be produced by CNC from CAD Models.**

drawn by  
**MH** 19/04/2011

sheet  
**10 of 18** scale  
**2:1 @ A3**

ALL DIMENSIONS ARE IN mm

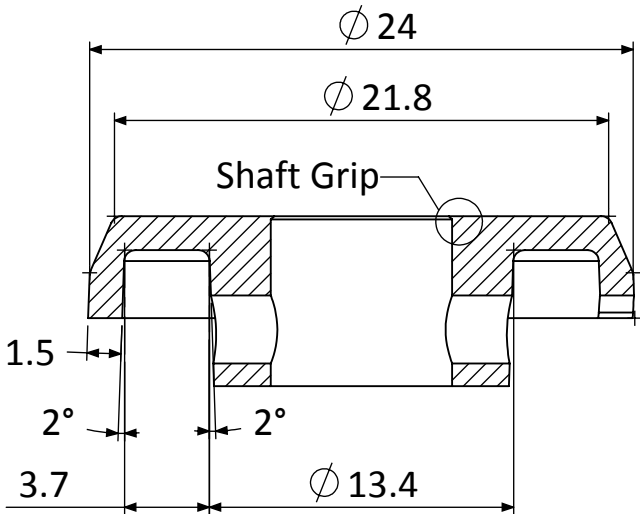
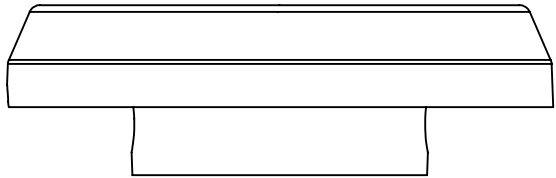
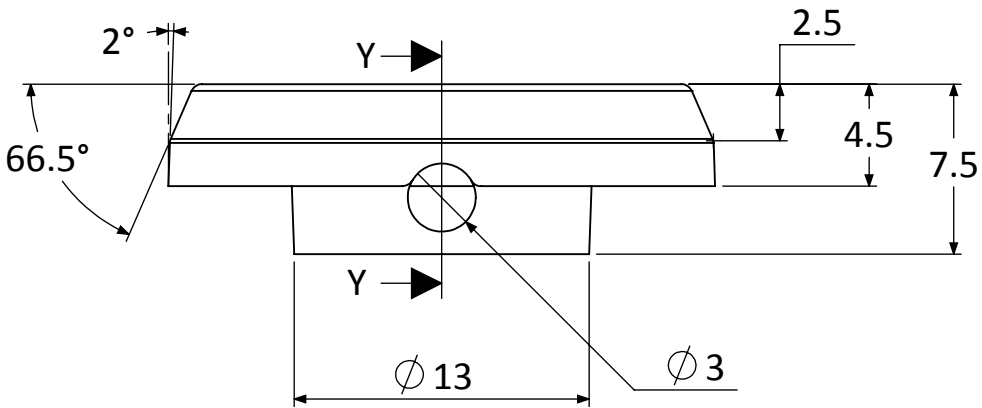
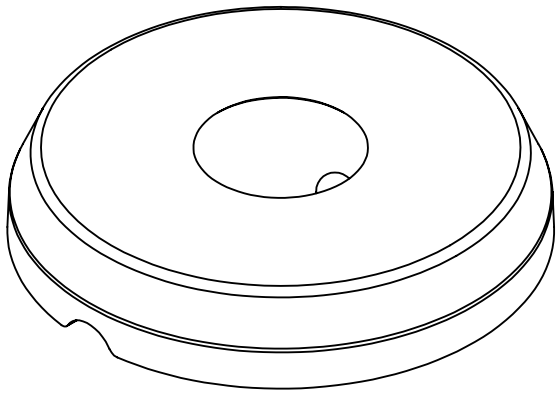
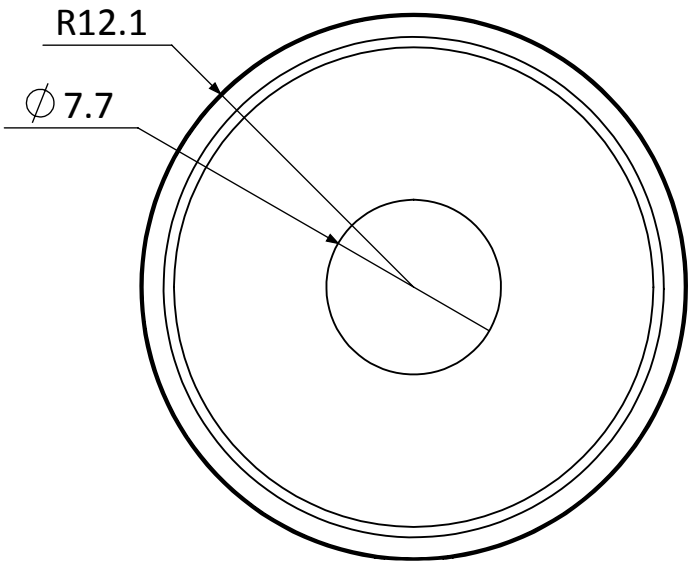
drawing  
**007-PTB-PACER**  
CAD file  
**Top Seal**  
file  
**Pacer Turbine**  
revision

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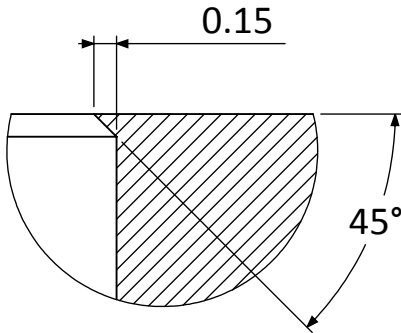
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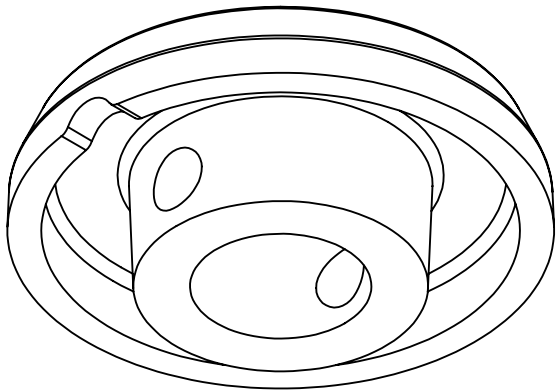
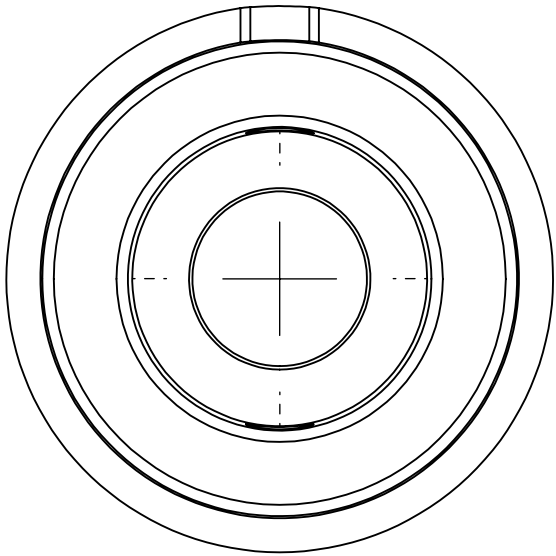


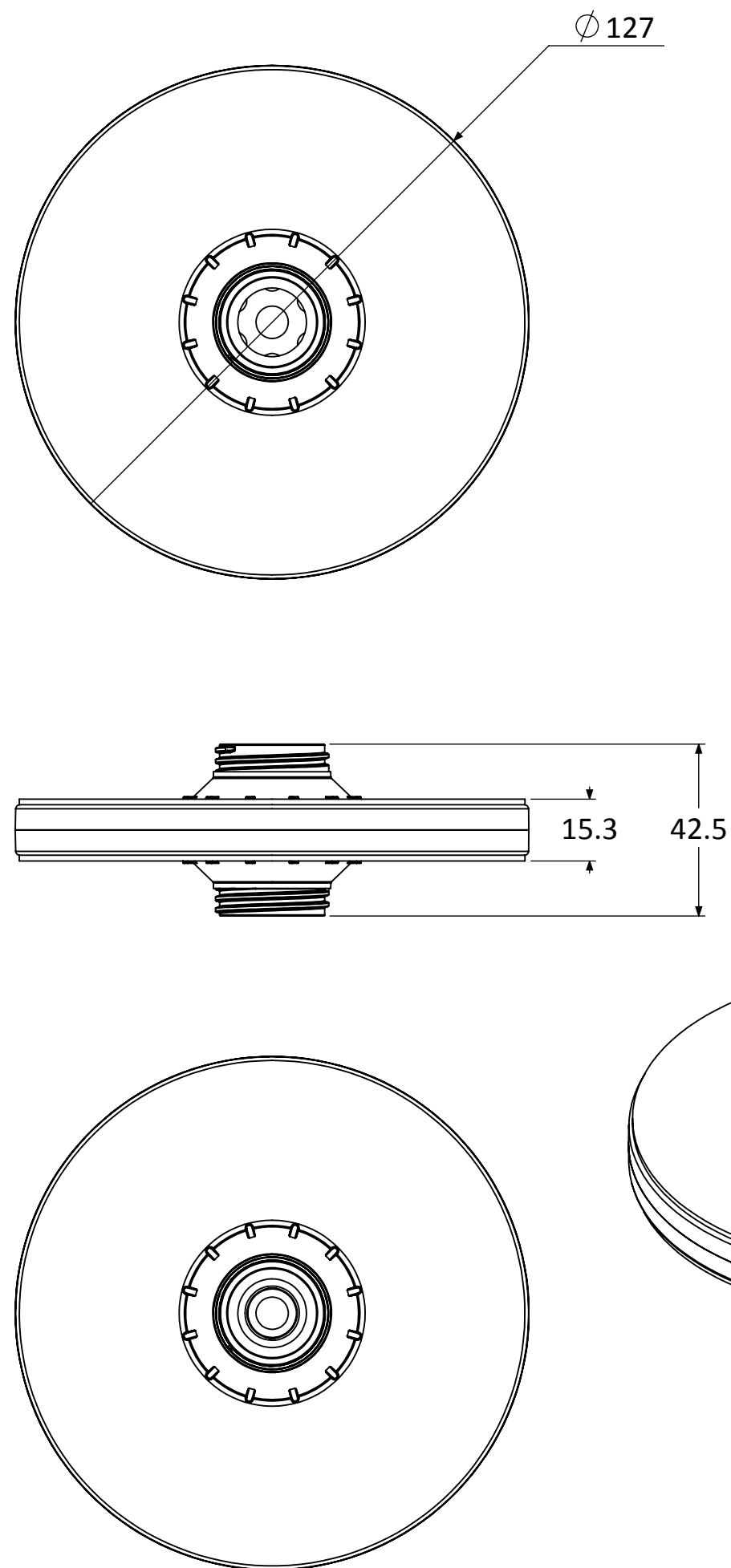


SECTION Y-Y

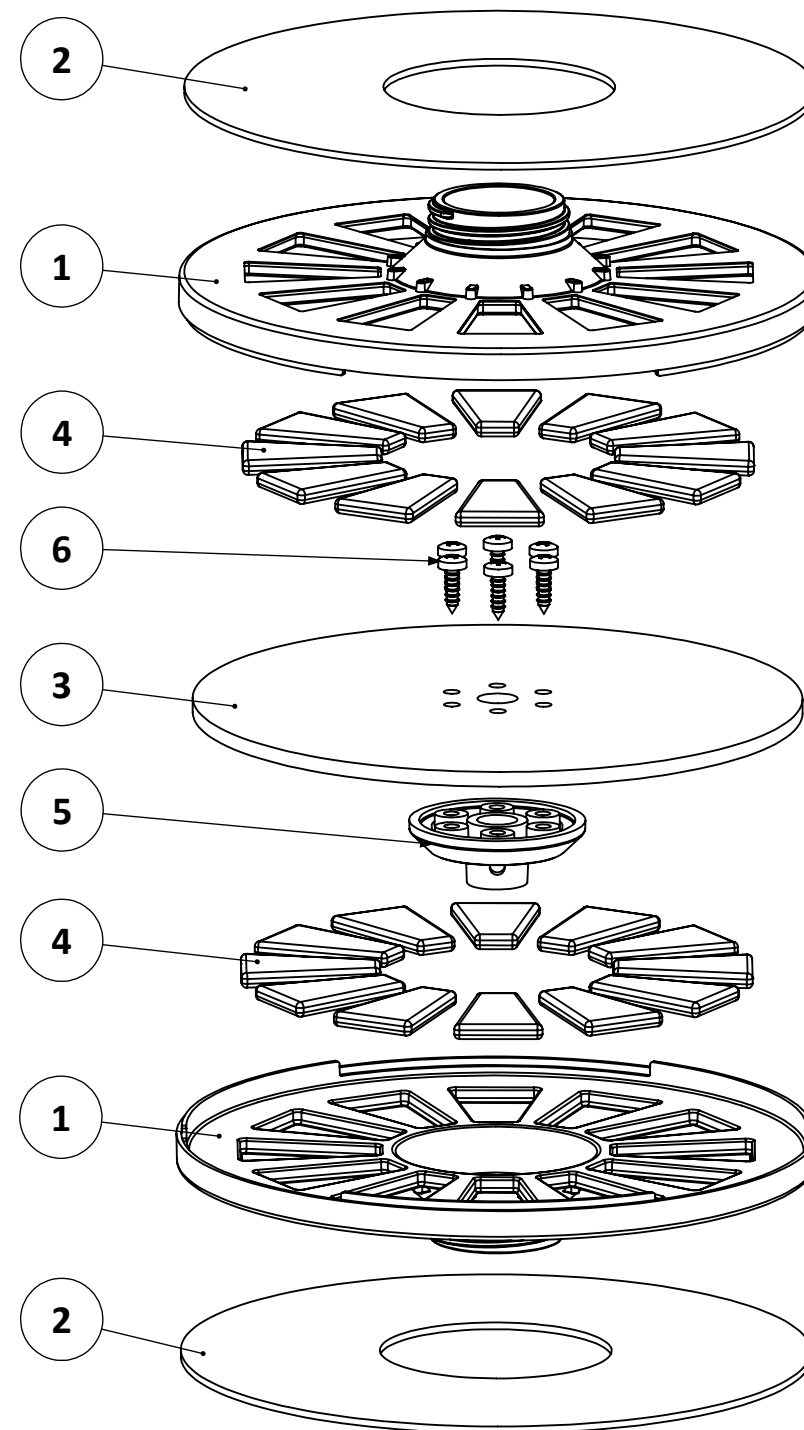


DETAIL Shaft Grip  
SCALE 20 : 1





#	Name	Drawing	QTY
1	Rotor Housing	010-PTB-PACER	2
2	Metal Disc	011-PTB-PACER	2
3	PCB Rotor	012-PTB-PACER	1
4	Magnet	013-PTB-PACER	24
5	PCB Hub	014-PTB-PACER	1
6	ST2.9x9.5 Pan Self Tapper	N/A	6



Pacer Turbines Ltd

project  
**PTB - Pacer Turbine**

part | assembly  
**Generator**

quantity (per unit)  
**1**

materials

finish

notes

drawn by  
**MH** 19/04/2011  
sheet scale  
**12 of 18** 2:3 @ A3  
ALL DIMENSIONS ARE IN mm

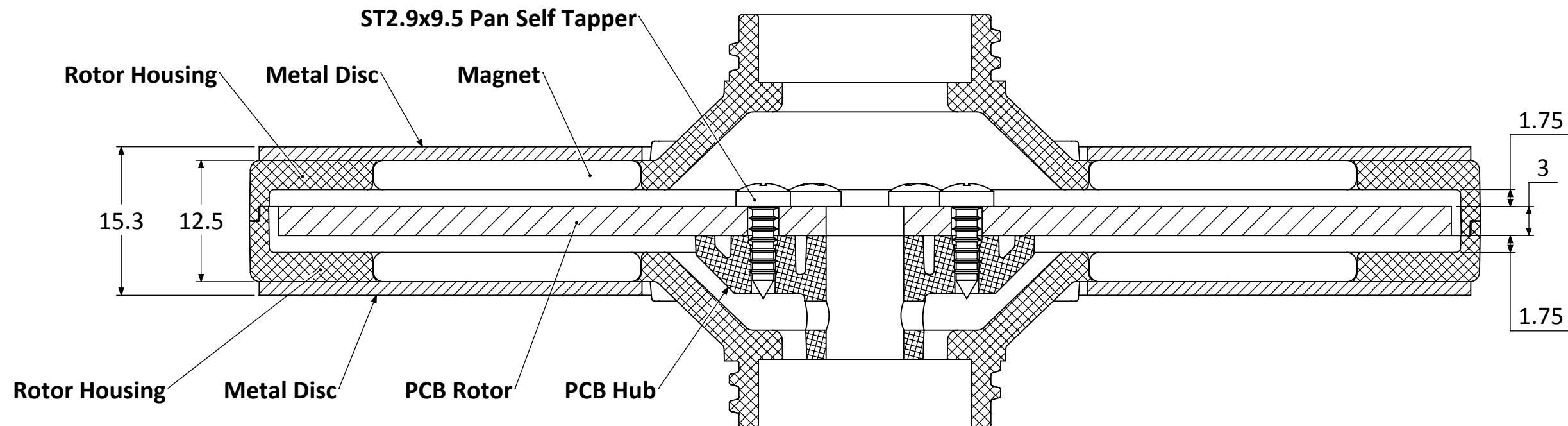
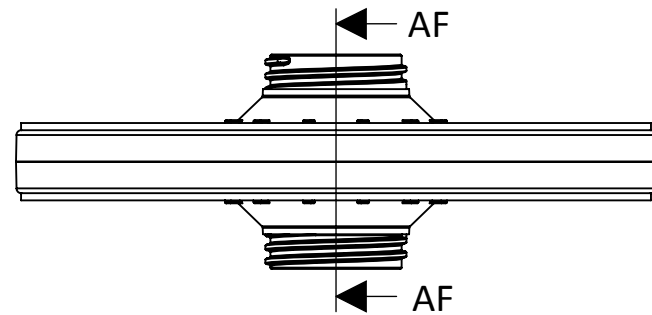
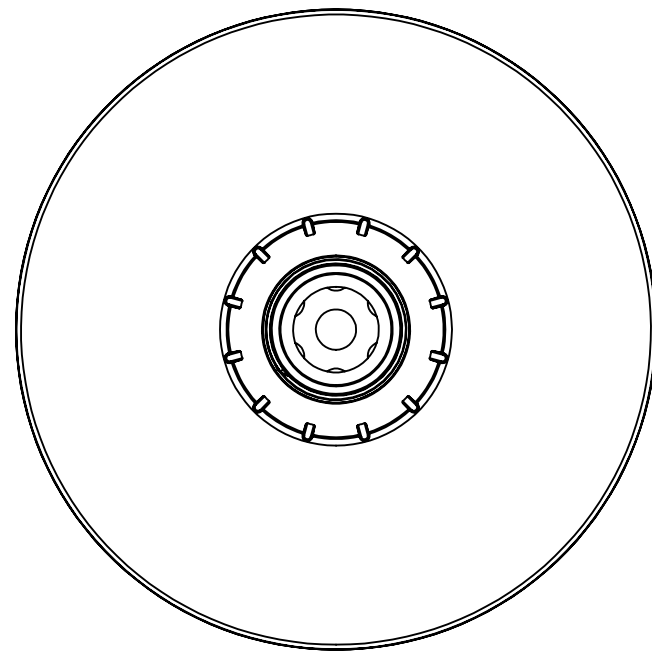
drawing  
**009-PTB-PACER**  
CAD file  
**Generator**  
file  
**Pacer Turbine**  
revision

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SECTION AF-AF  
SCALE 2 : 1

Pacer Turbines Ltd

project  
**PTB - Pacer Turbine**

part | assembly  
**Generator**

quantity (per unit)  
**1**

materials

finish

notes

drawn by  
**MH** 19/04/2011  
sheet scale  
**13 of 18** 2:3 @ A3  
ALL DIMENSIONS ARE IN mm

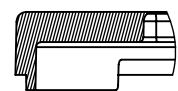
drawing  
**009-PTB-PACER**  
CAD file  
**Generator**  
file  
**Pacer Turbine**  
revision

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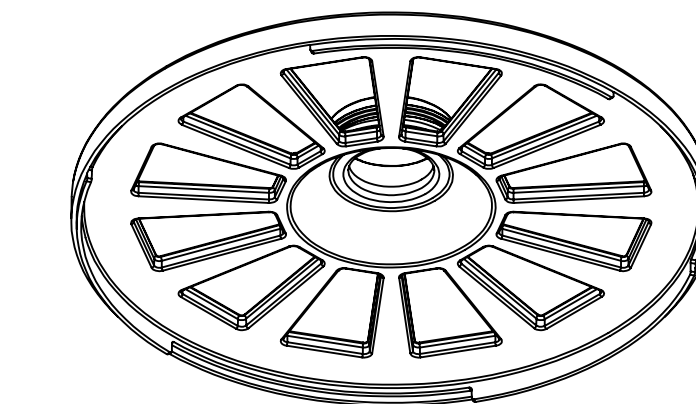
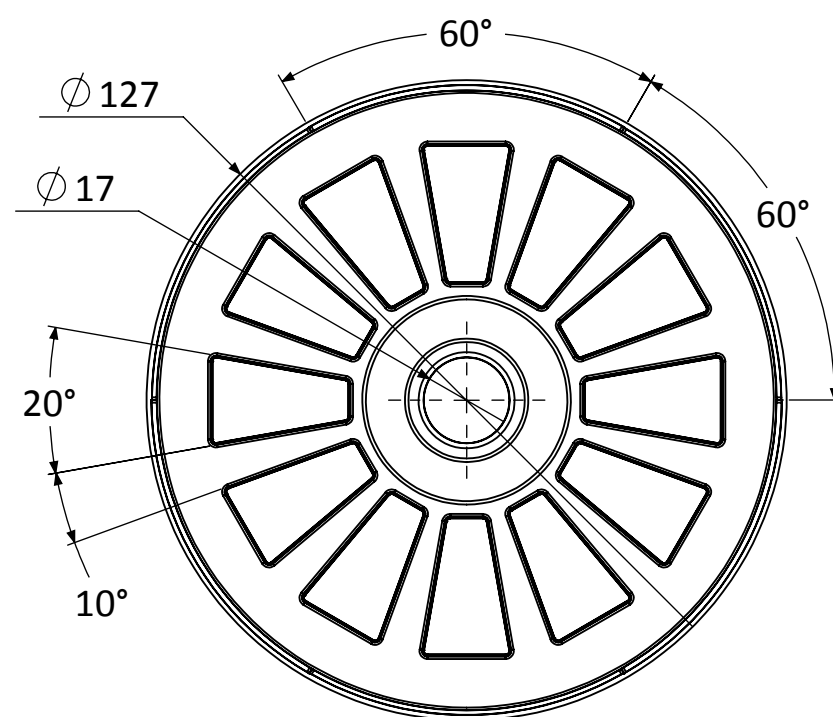
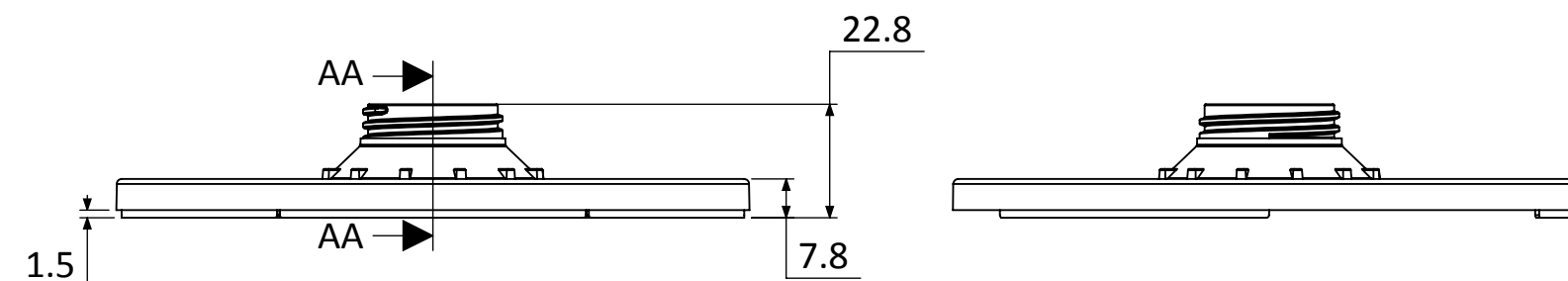
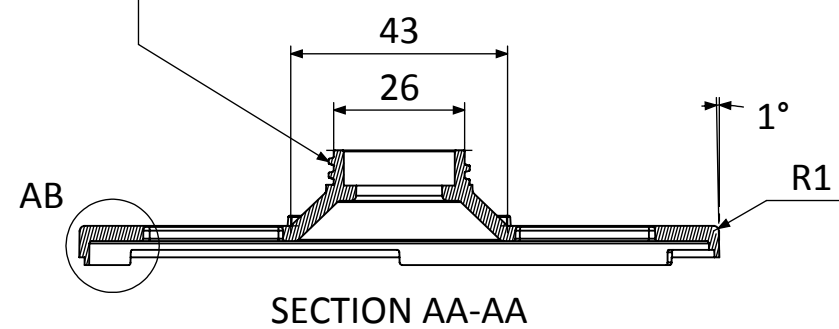
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DETAIL AB  
SCALE 4 : 3

Modified ACME Thread used on all threads  
Ref: 003-PTB-PACER



project  
-

part | assembly  
**Rotor Housing**

quantity (per unit)  
**2**

materials

finish

notes  
**Dimensions Informational Only**  
**Parts should be produced by**  
**CNC from CAD Models.**

drawn by  
**19/04/2011**  
sheet  
**14 of 18**  
scale  
**2:3 @ A3**  
ALL DIMENSIONS ARE IN mm

drawing  
**010-PTB-PACER**  
CAD file  
**Rotor Housing**  
file  
**Pacer Turbine**  
revision

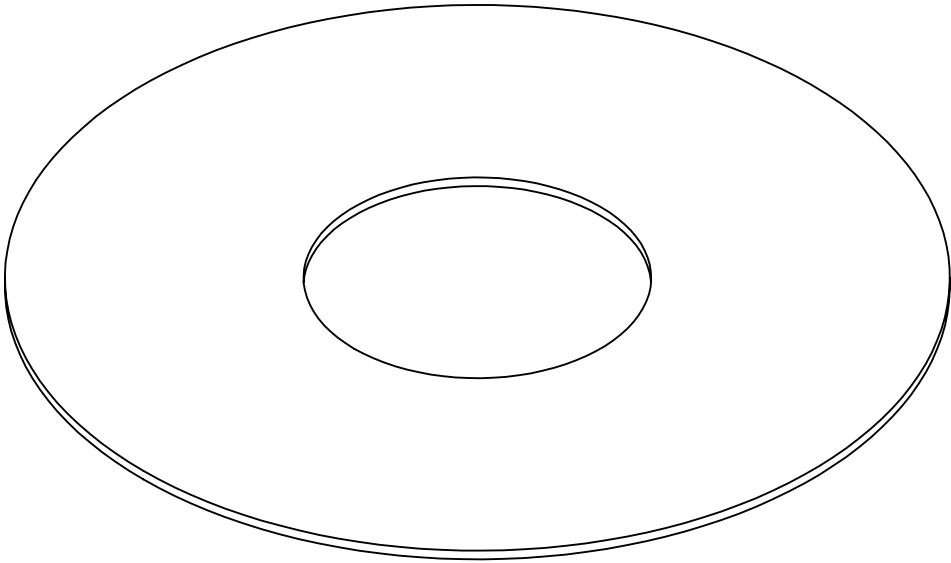
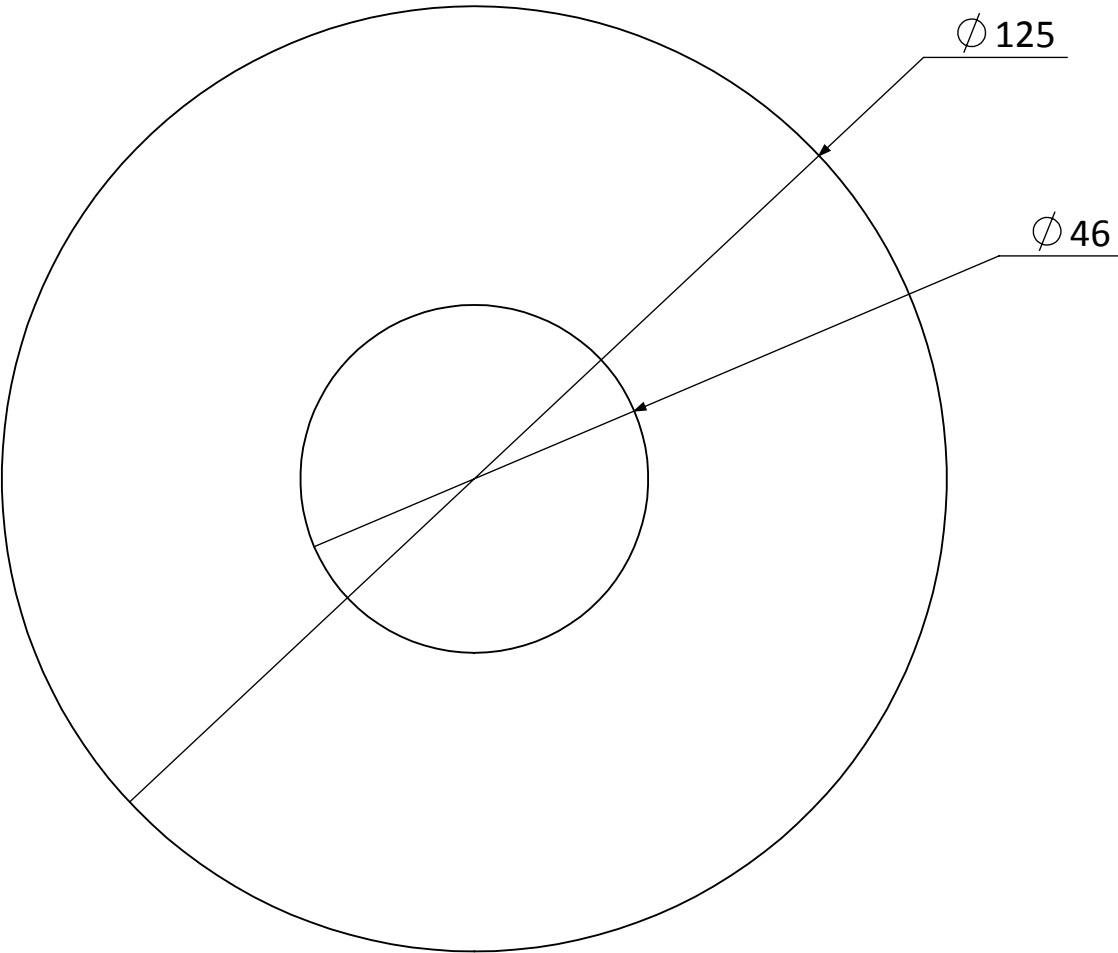
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Pacer Turbines Ltd

project  
PTB - Pacer Turbine

part | assembly  
Metal Disc

quantity (per unit)  
2

materials  
MS

finish  
TBC

notes  
Dimensions Informational Only  
Parts should be produced by  
CNC from CAD Models.

drawn by	
MH	19/04/2011
sheet	scale
15 of 18	1:1 @ A3

ALL DIMENSIONS ARE IN mm

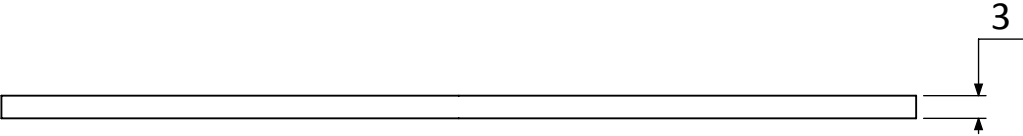
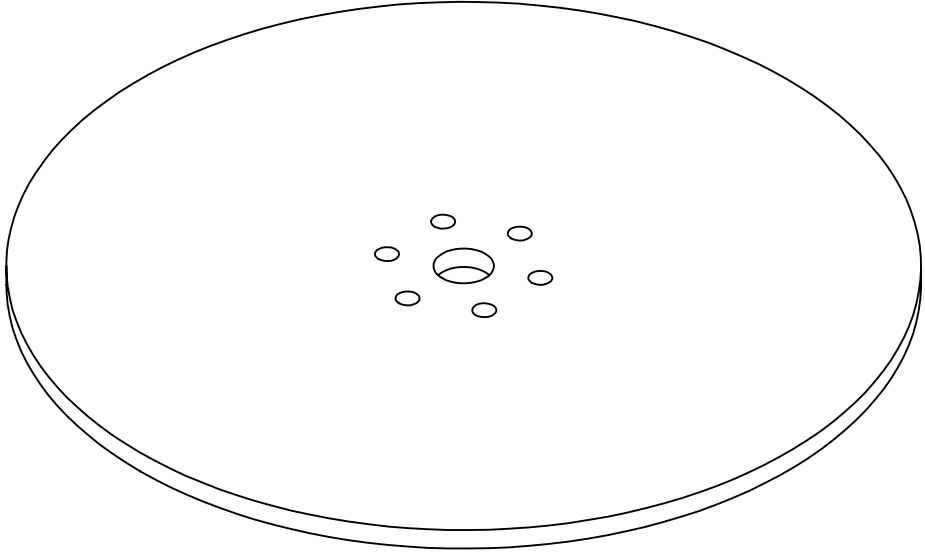
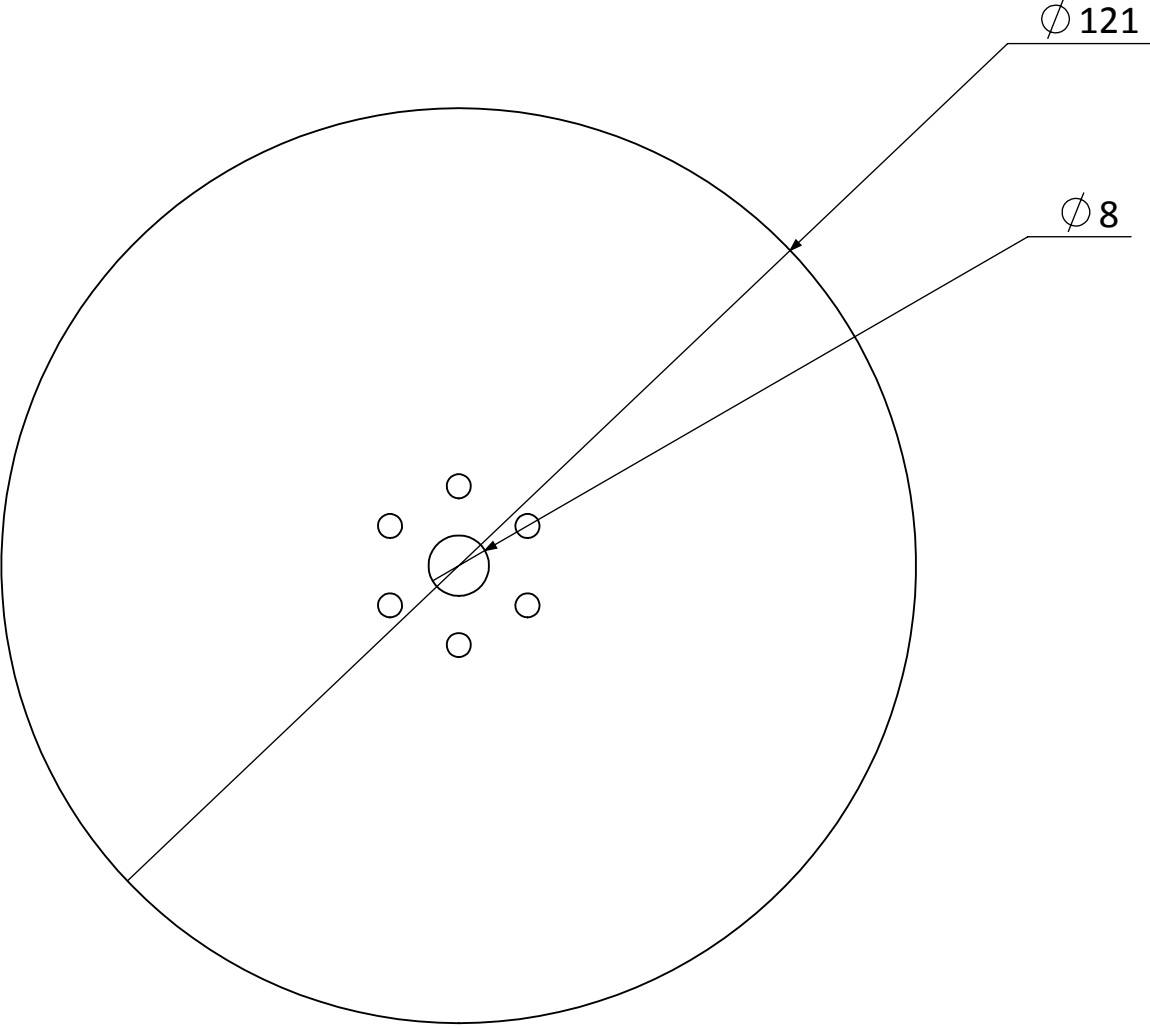
drawing  
011-PTB-PACER  
CAD file  
Metal Disc  
file  
Pacer Turbine  
revision

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www.pacerturbines.com





Pacer Turbines Ltd

project  
PTB - Pacer Turbine

part | assembly  
PCB Rotor

quantity (per unit)  
1

materials  
12 Layer PCB

finish

notes  
Dimensions Informational Only  
Parts should be produced by  
CNC from CAD Models.

drawn by  
MH  
sheet  
16 of 18  
19/04/2011  
scale  
1:1 @ A3  
ALL DIMENSIONS ARE IN mm

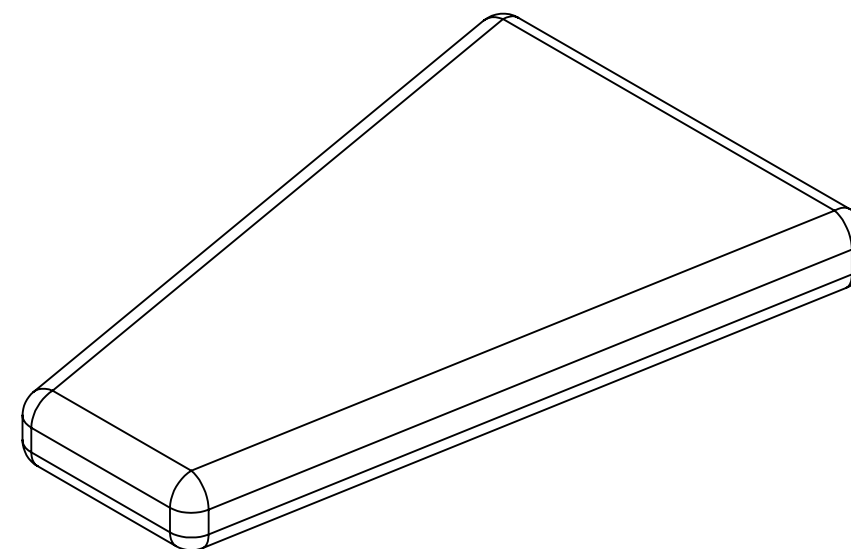
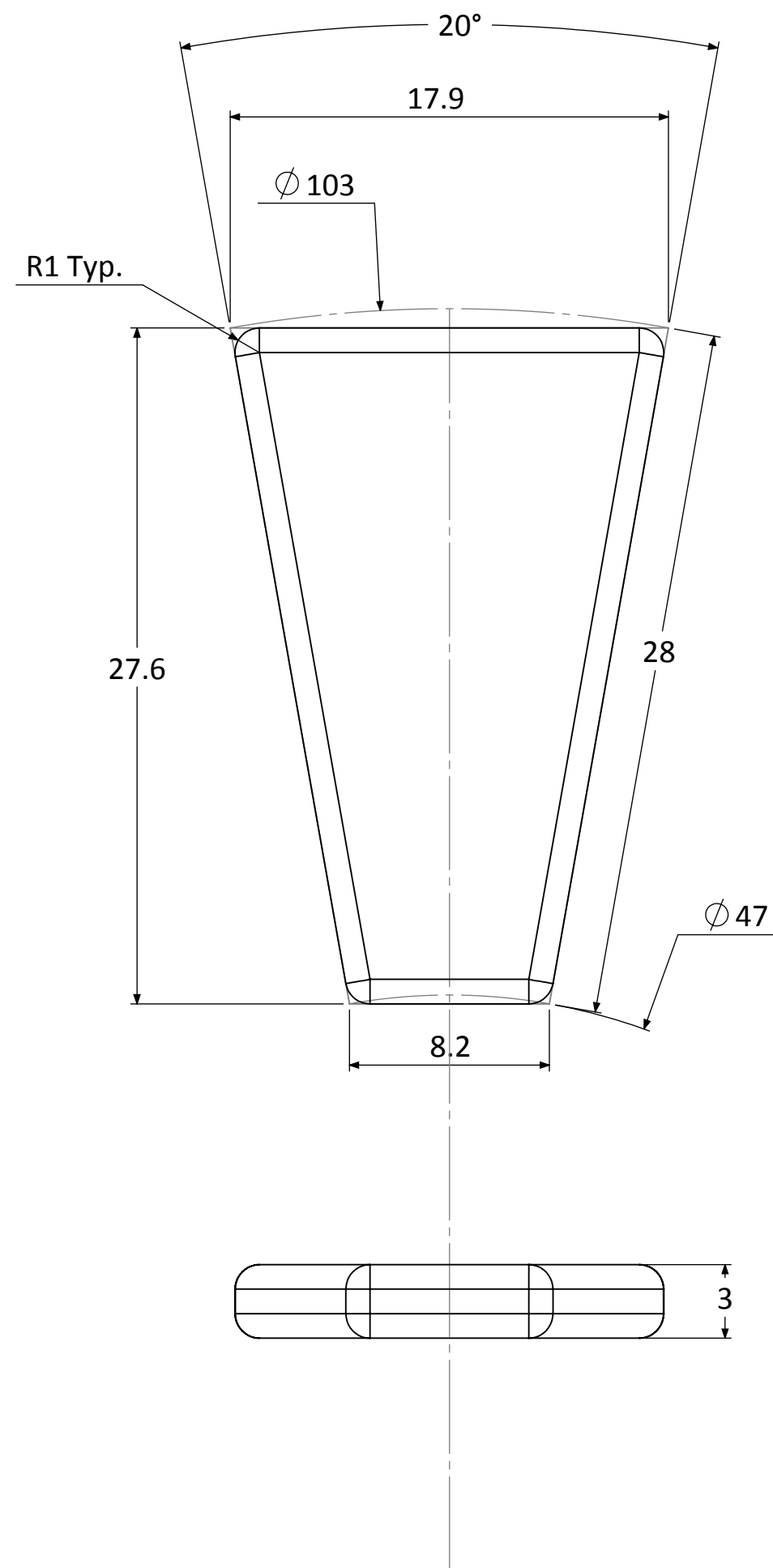
drawing  
012-PTB-PACER  
CAD file  
PCB  
file  
Pacer Turbine  
revision

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Pacer Turbines Ltd

project  
**PTB - Pacer Turbine**

part | assembly  
**Magnet**

quantity (per unit)  
**24**

materials  
**NdFeB-N42 NickelPlated**

finish

notes  
**Dimensions Informational Only  
Parts should be produced by  
CNC from CAD Models.**

drawn by  
**MH** 19/04/2011  
sheet scale  
**17 of 18** 4:1 @ A3

ALL DIMENSIONS ARE IN mm

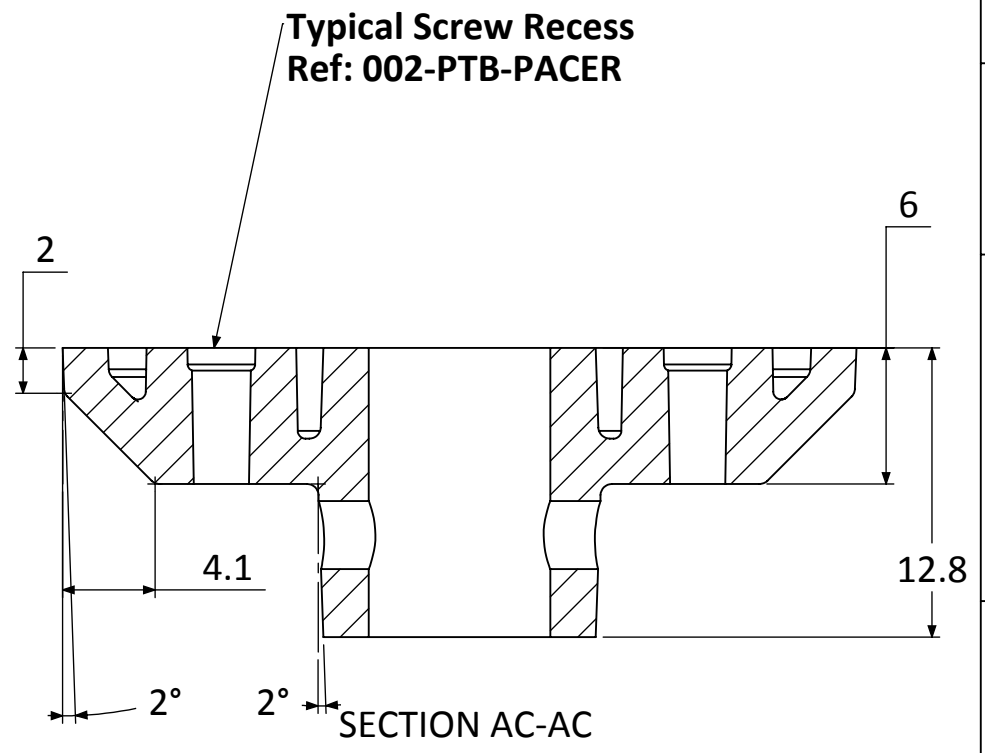
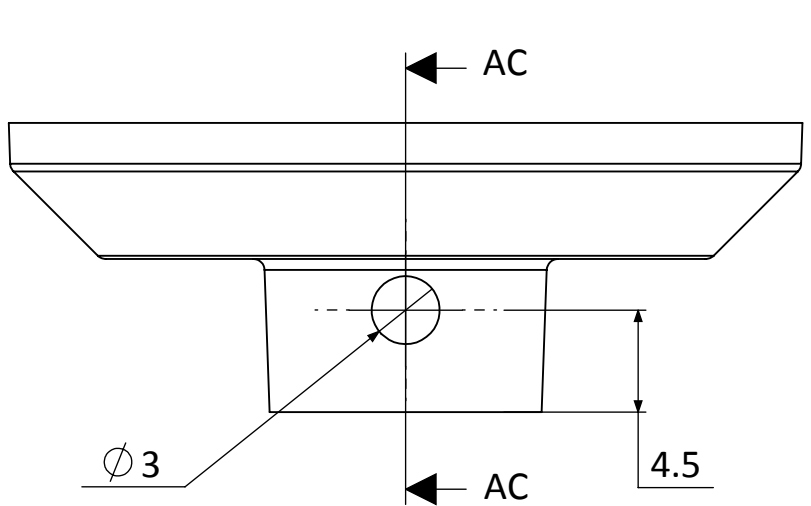
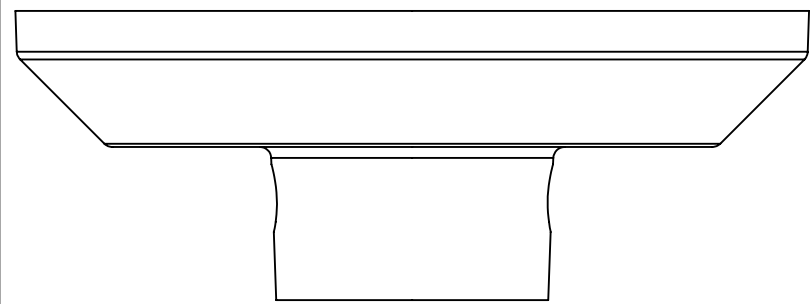
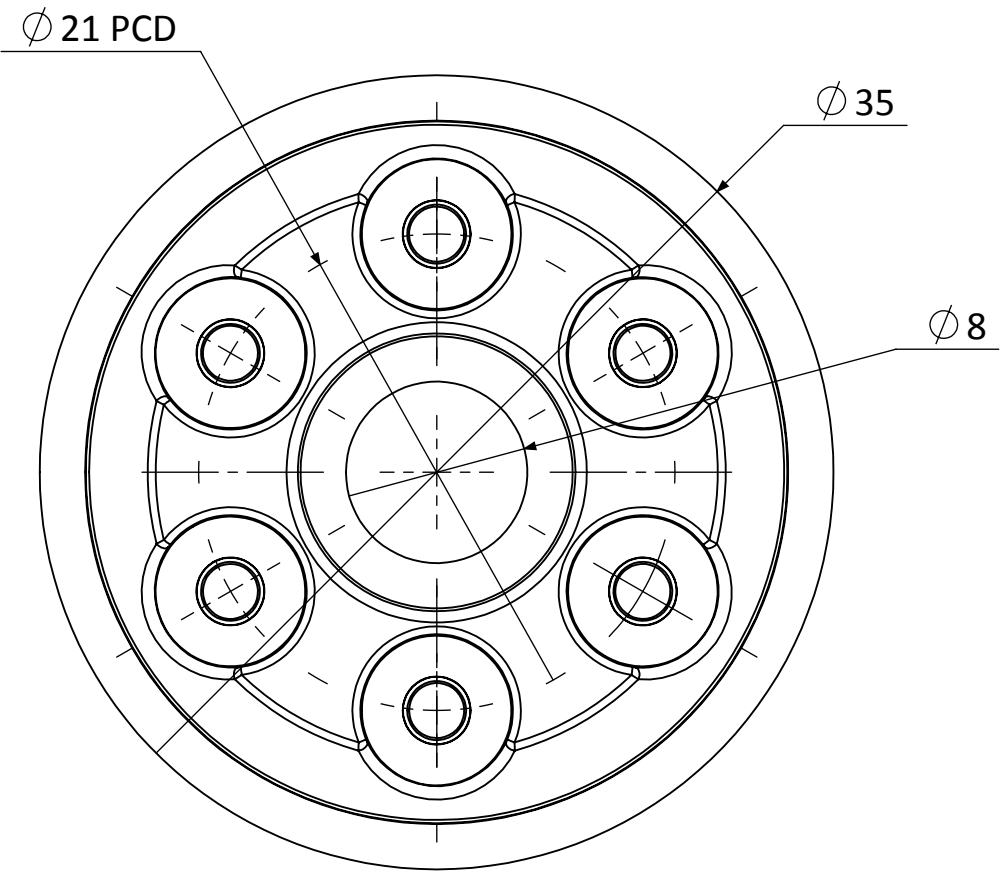
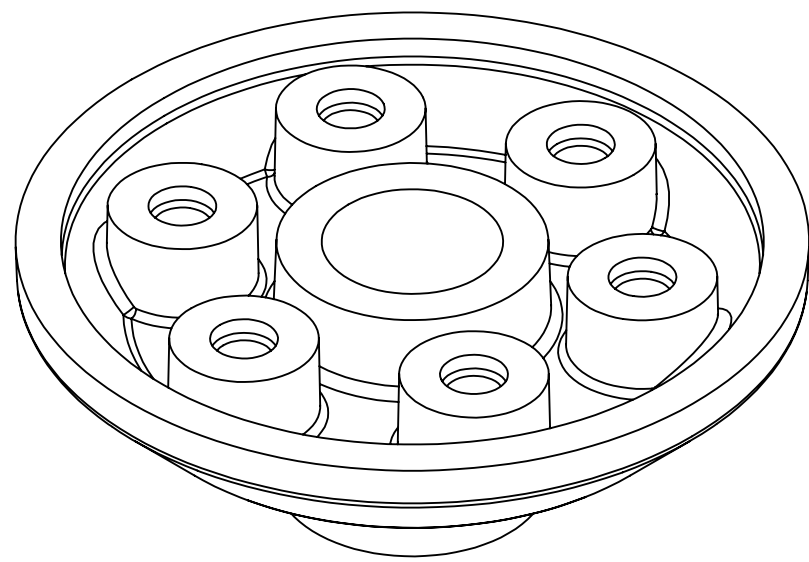
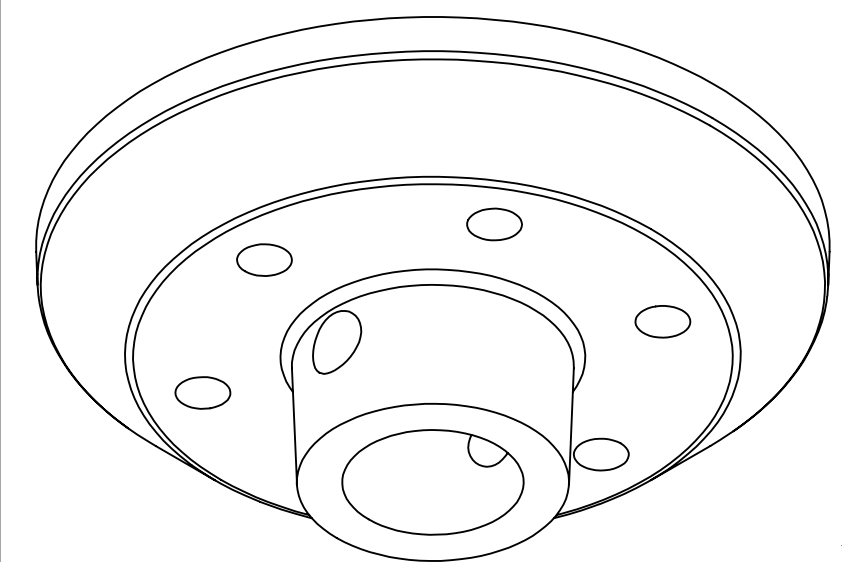
drawing  
**013-PTB-PACER**  
CAD file  
**Magnet\_NdFeB-N42-**  
**NickelPlated**  
file  
**Pacer Turbine**  
revision

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**Pacer Turbines Ltd**

project  
**PTB - Pacer Turbine**

part | assembly  
**PCB Hub**

quantity (per unit)  
**1**

materials

finish

notes  
**Dimensions Informational Only  
Parts should be produced by  
CNC from CAD Models.**

drawn by  
**MH** 19/04/2011

sheet  
**18 of 18** scale  
**3:1 @ A3**

ALL DIMENSIONS ARE IN mm

drawing  
**014-PTB-PACER**  
CAD file  
**PCB Hub**  
file  
**Pacer Turbine**  
revision

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TURBINES