A DESIGN TO BUILD THE MPM

The attached design meets the dimensional and performance criteria for the MPM. I invite you to build it or to improve the design.

DRAWING SCHEDULE

The following drawings are attached:

DWG No.	TITLE
01	DRIVE WHEEL
02	BASE PLATE
02/1	BASE PLATE DETAIL
02/2	DRILLING DETAIL
03	DRIVE WHEEL CALIBRATION ON DISC
03/1	DRIVE WHEEL POSITIONING SCHEDULE
03/2	MAGNET POLARITY IN BASE PLATE
04	DRIVE WHEEL AND BASE PLATE DETAIL

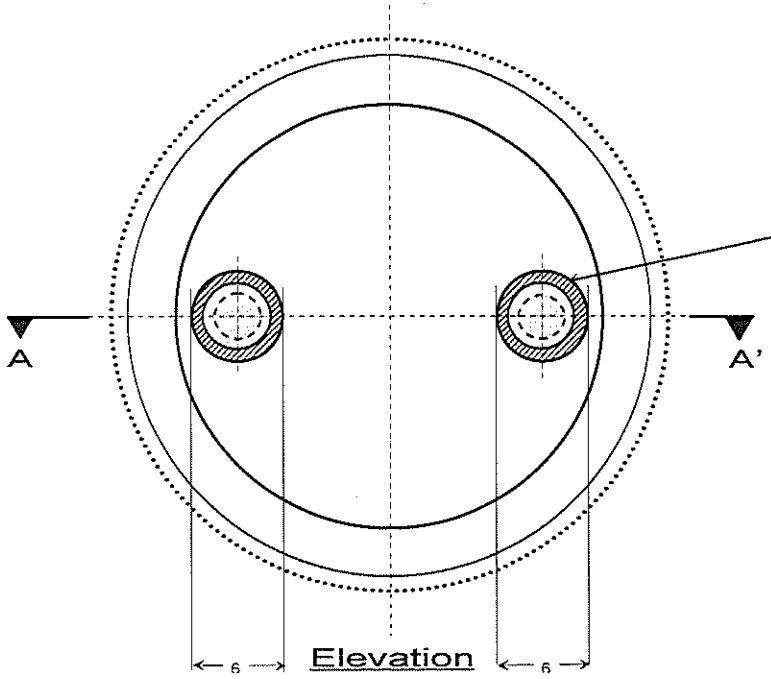
SPECIFICATIONS

Magnets

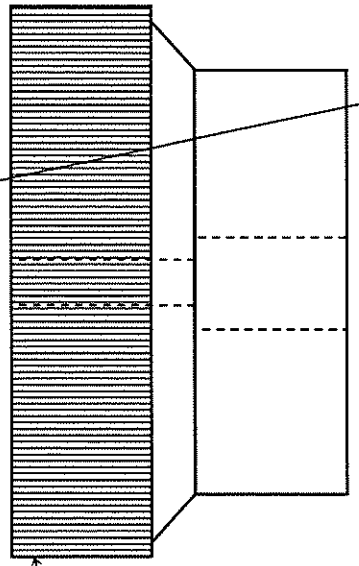
All magnets are: Neodymium Rare Earth Magnets
Rod, code 21052, 4mm x 10mm (Dia x Length)
Grade 38 rated to 80 deg C

Materials

All materials used in the construction of all components are to be non-ferrous metals or compounds unless indicated otherwise.



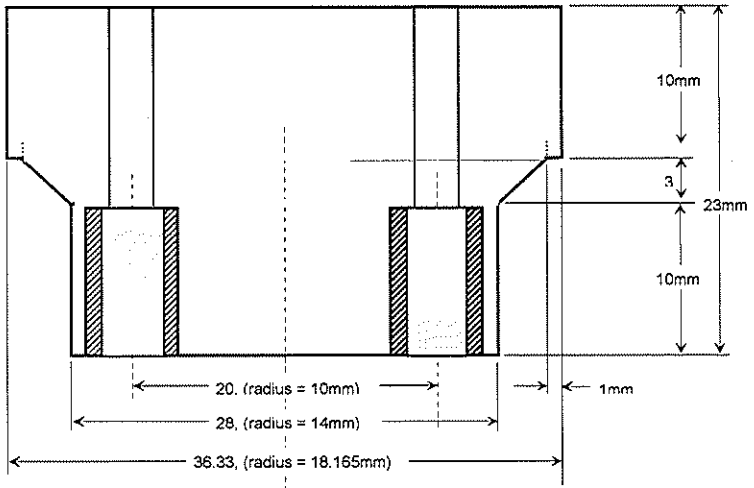
Elevation



End Elevation

1mm thick steel sleeve to 4mm x 10mm rod magnet

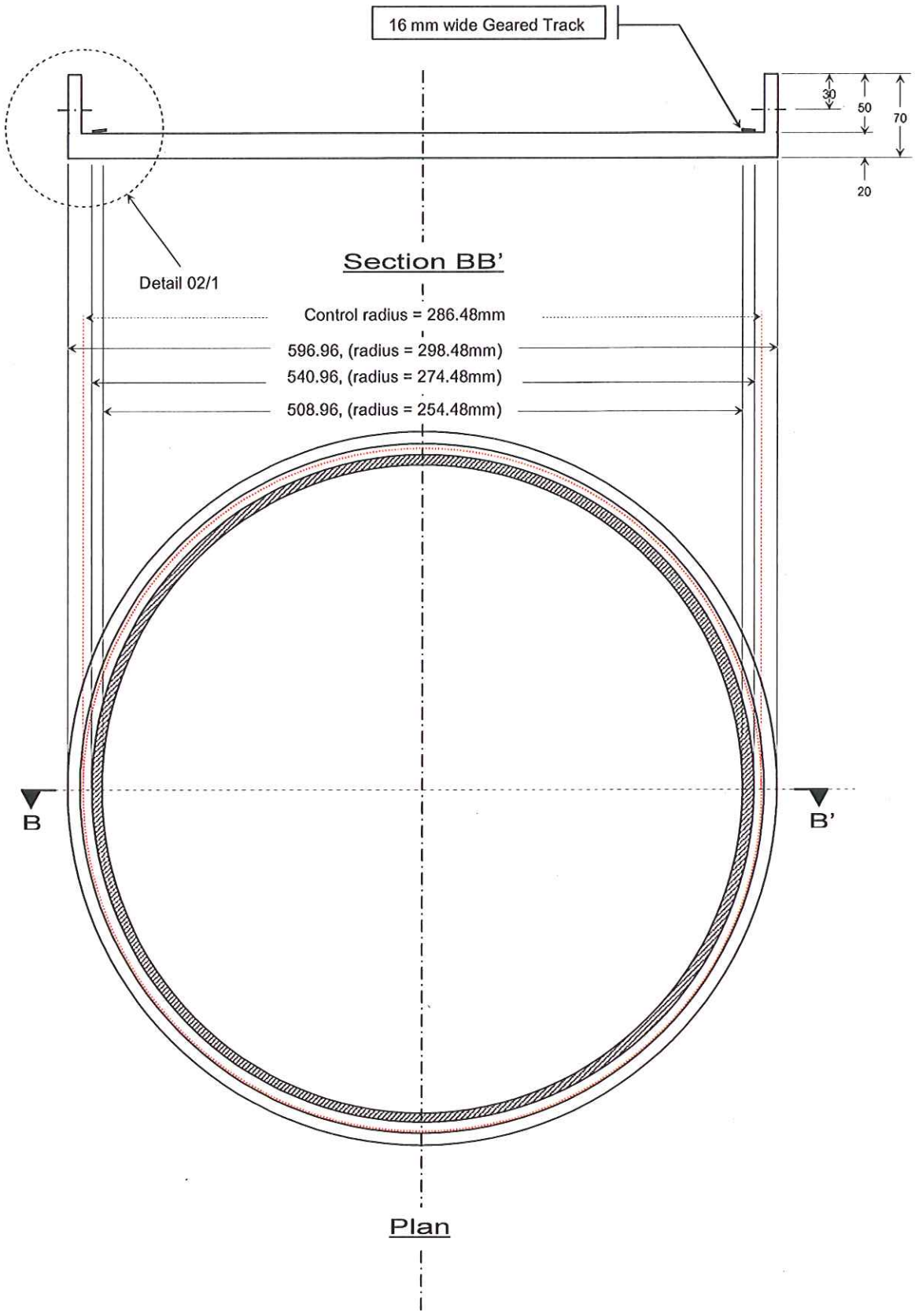
Geared to provide 15 revolutions of the Drive Wheel as it makes one revolution on the Track Gear
[The critical performance requirement is to traverse (horizontally) a distance of 120 mm as measured at the control bead]



Section AA'

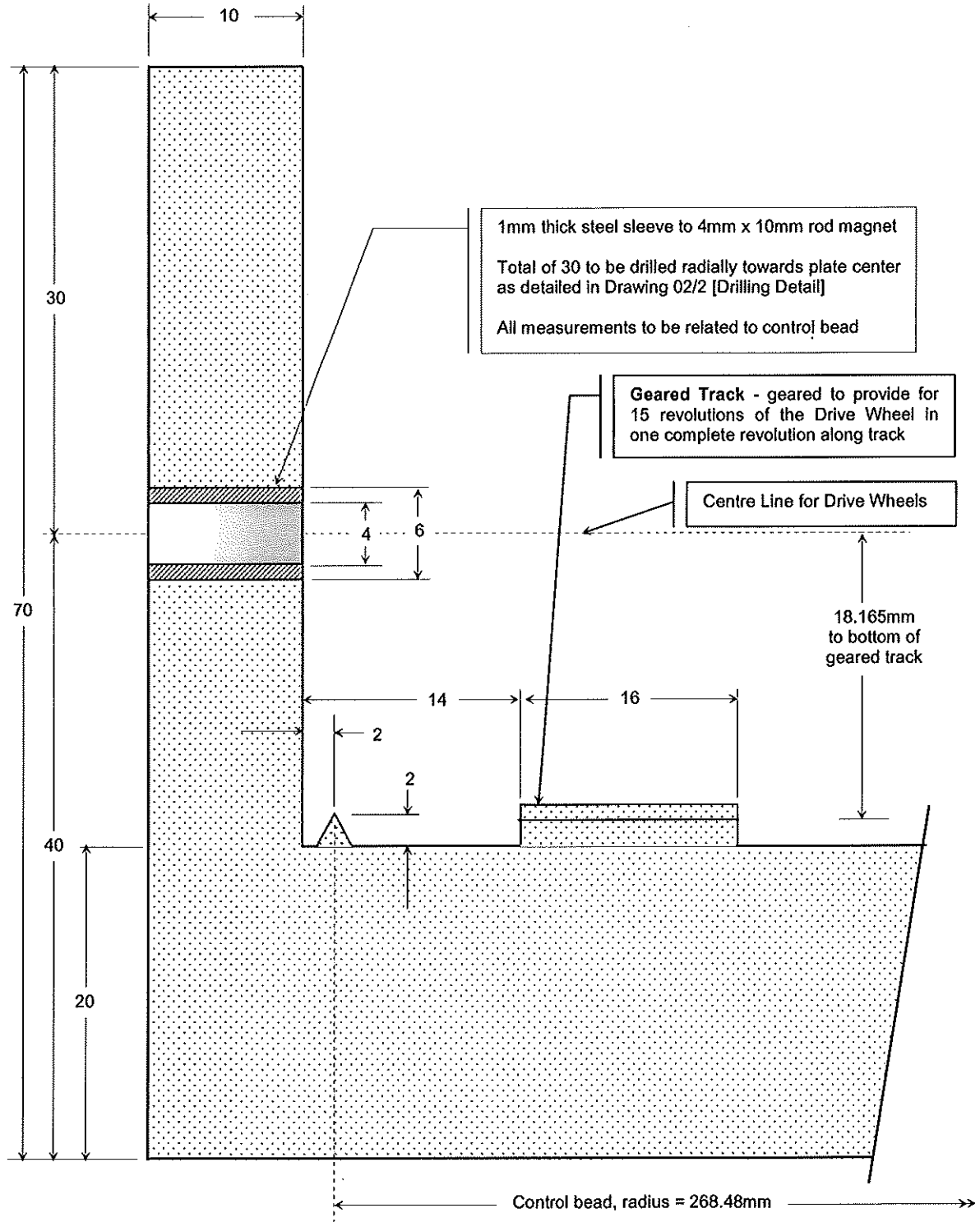
DWG 01
DRIVE WHEEL [Qty – 16]

All dimensions are in mm



DWG 02
BASE PLATE [Qty – 1]

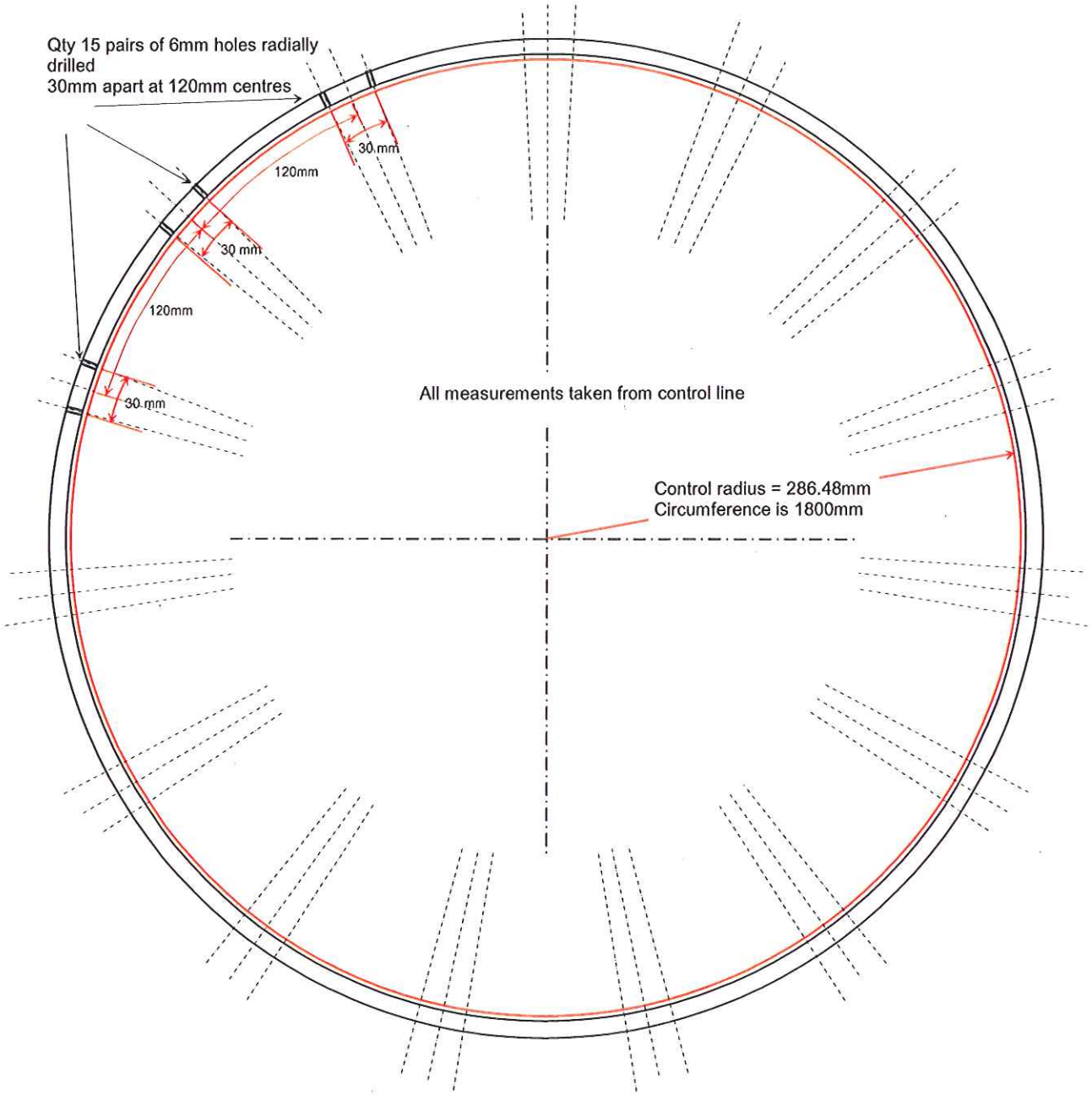
All dimensions are in mm



Base Plate End Detail 02/1

DWG 02/1
BASE PLATE DETAIL

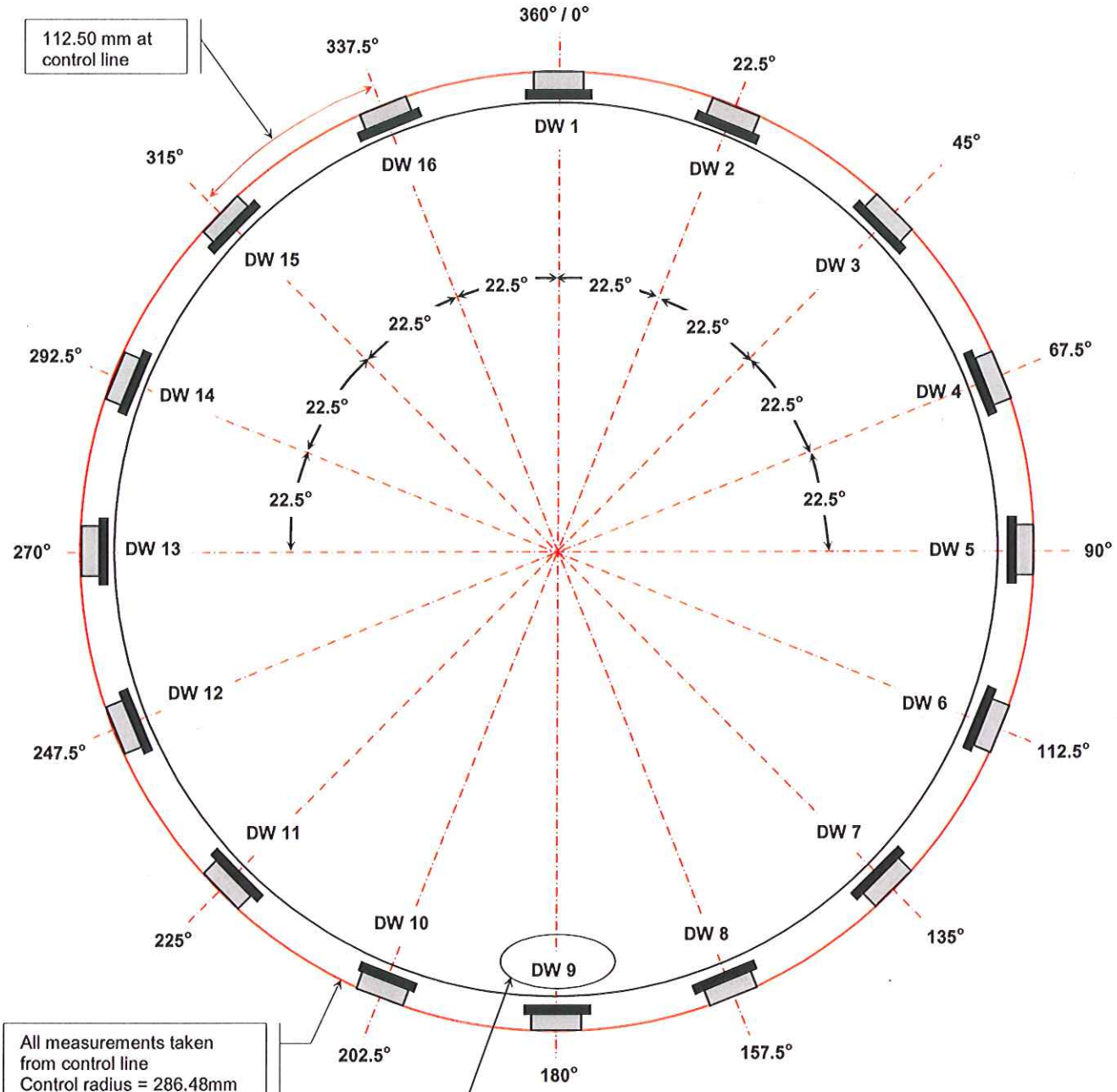
All dimensions are in mm



Plan

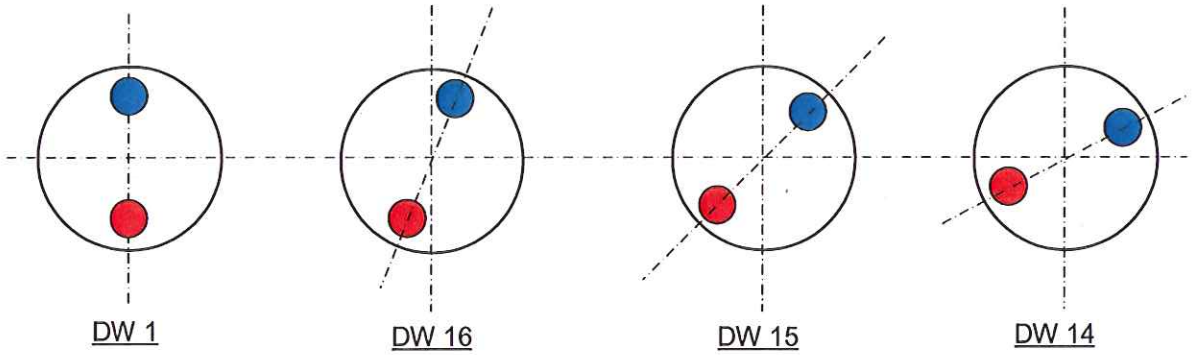
DWG 02/2
DRILLING DETAIL

All dimensions are in mm

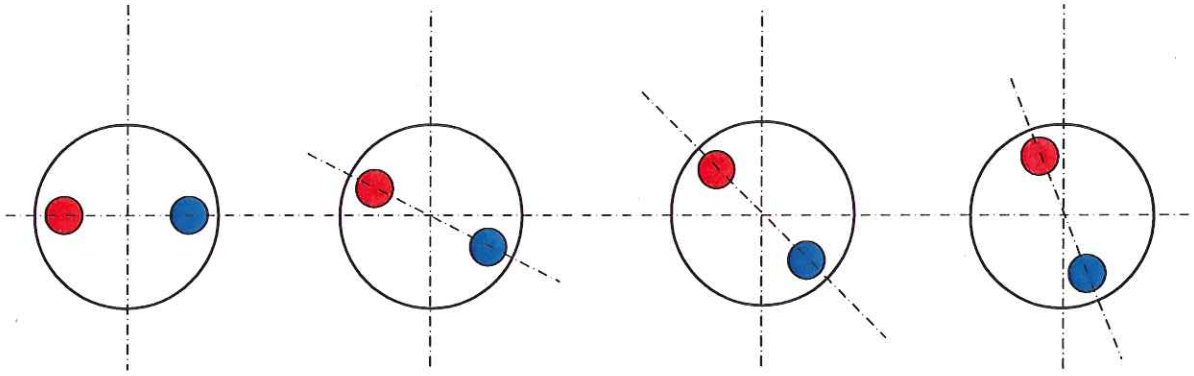


Plan

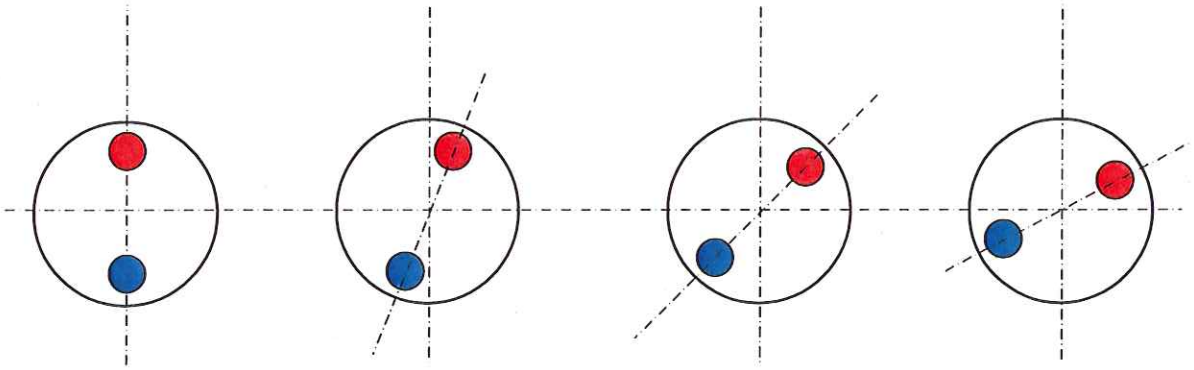
DWG 03
DRIVE WHEEL CALIBRATION
ON DISC
All dimensions are in mm



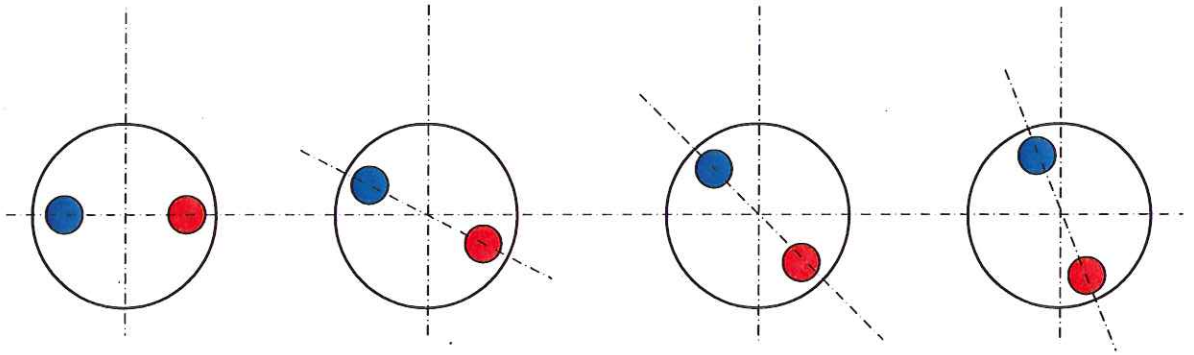
DW 1 DW 16 DW 15 DW 14



DW 13 DW 12 DW 11 DW 10

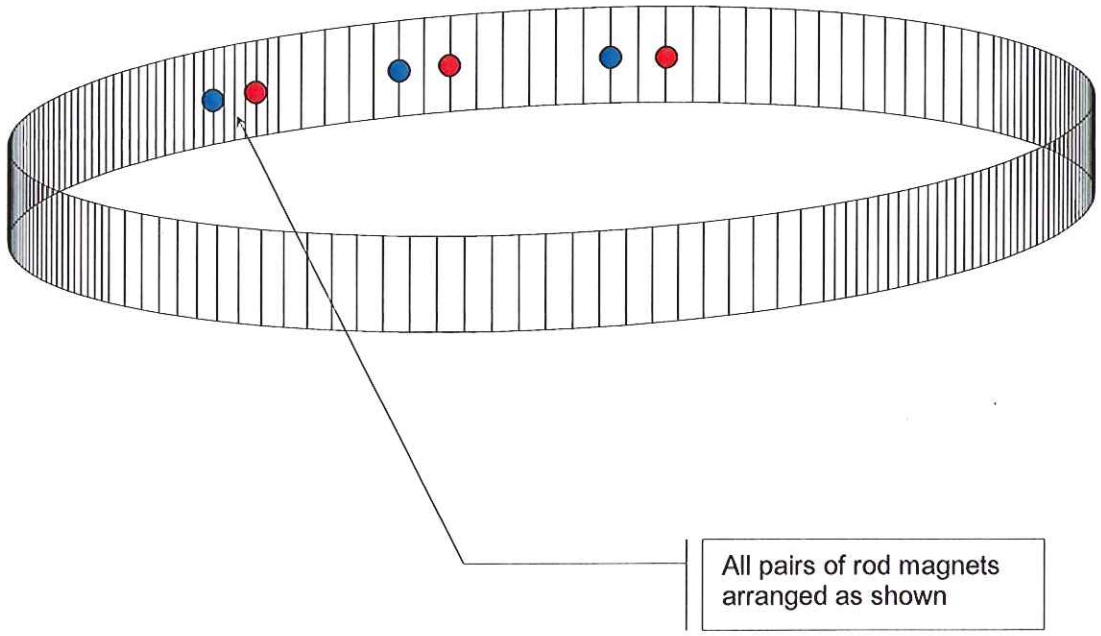


DW 9 DW 8 DW 7 DW 6

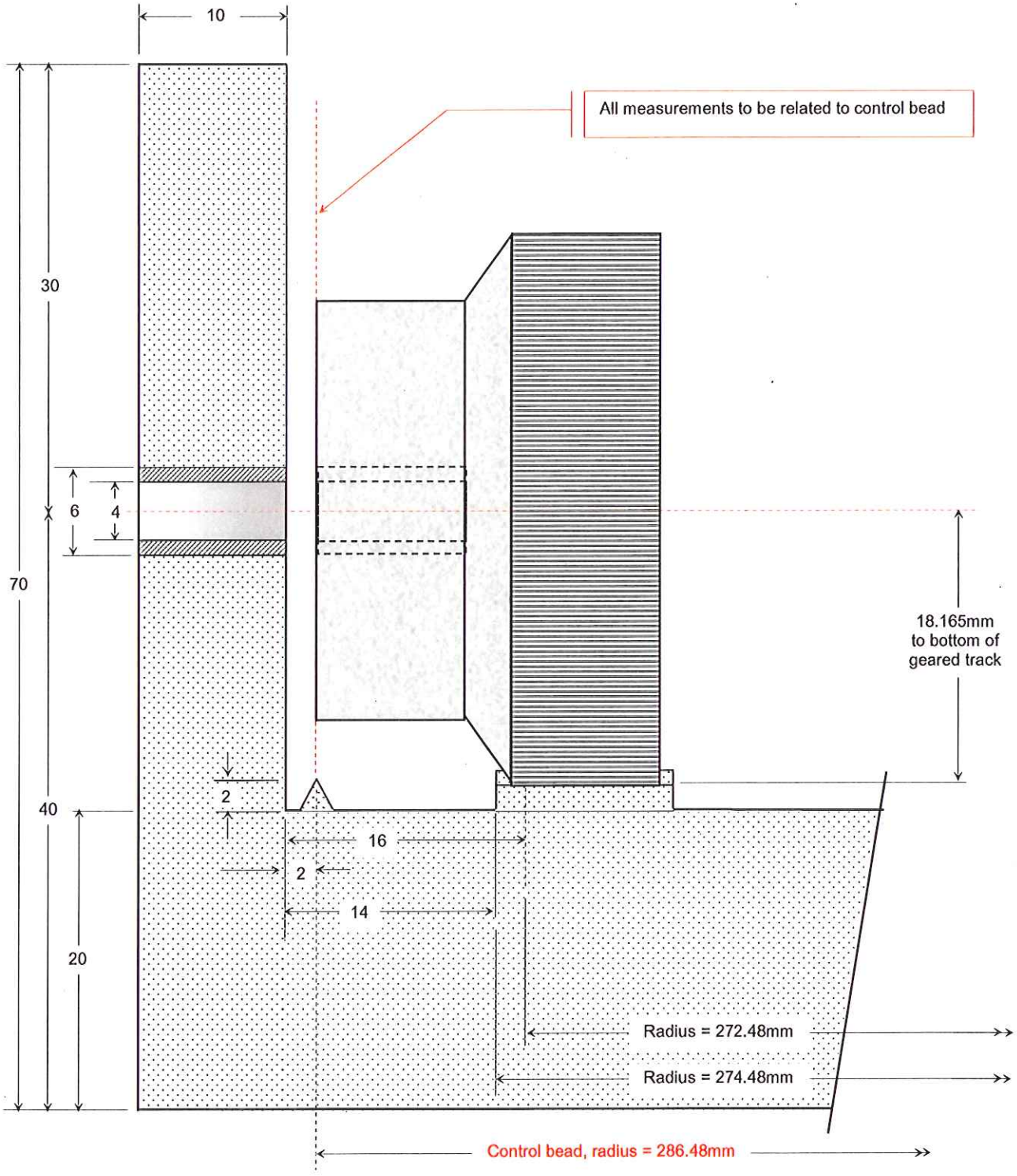


DW 5 DW 4 DW 3 DW 2

DWG 03/1
DRIVE WHEEL POSITIONING SCHEDULE



DWG 03/2
MAGNET POLARITY IN BASE PLATE



Base Plate with Drive Wheel Detail

DWG 04
DRIVE WHEEL AND BASE PLATE DETAIL

All dimensions are in mm