Specifications:

Temperature Compensated 'Gd' doped Samarium Cobalt Ring Magnets (Sm_2Co_{17})

Quantity: 50 sets
A Set consists of 4 ring magnets as given below (drawings attached):

Ø 57 mm (O.D) x 52mm (ID) x 8 mm (w) - O.D North polarity : D/Mag/2010/OUT (3&4)
Ø 57 mm (O.D) x 52mm (ID) x 8 mm (w) - O.D South polarity : D/Mag/2010/OUT (3&4)
Ø 42 mm (O.D) x 36mm (ID) x 8 mm (w)) – O.D North polarity : D/Mag/2010/IN (1&2)
Ø 42 mm (O.D) x 36mm (ID) x 8 mm (w)) – O.D South polarity : D/Mag/2010/IN (1&2)

Polarization: Radial
Magnetical Properties (Typical)
Reverse temperature coefficient of Remanance < 50ppm/**°C** for a temperature range of 25 **°C** to 75 **°C**.

BH_{max}	200	KJ/m^3
Br	1	T
iHcJ	1900	kA/m
Hcb	700	kA/m
Reversible temp. coeff. Of remanance	50	ppm/ **°C**
Operating Temperature (max.)	300	**°C**

Physical Properties

Density	8.3-8.4	gm/cc
Curie temperature	800	°C
Vickers Hardness	600	HV
Tensile Strength	39	MPa
Compressive Strength	650	MPa
Flexural Strength	120	MPa
Young's Modulus	150	GPa
Stress Crack Resistance	45	$N/mm^{3/2}$
Coefficient of Thermal expansion		
//	5-8	E -6/K
⊥	11-12	E -6/K
Electrical Resistivity	8	E -7 ohm-m
Specific Heat	390	J/kg-K

Note:

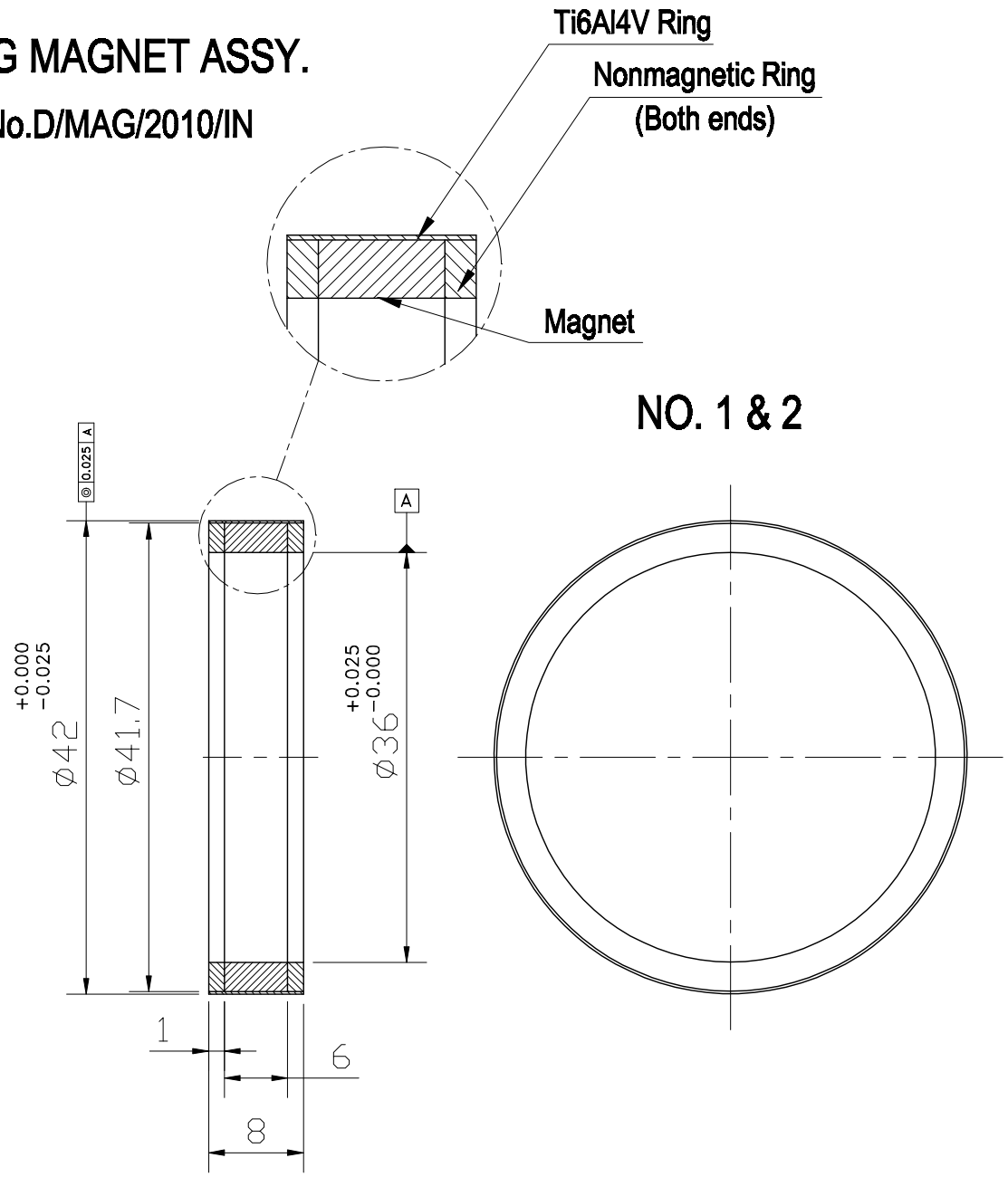
- To be supplied in magnetized condition as per drawing Nos. D/Mag/2010/IN (1&2) and D/Mag/2010/OUT (3&4)
- Radial orientation cylindrical rings, having only two magnetic poles, outer diameter forms one magnetic pole and inner diameter another magnetic pole.

General conditions:

1. Each magnetic ring should be given suitable support structure and packed in separate containers along with complete dimensions (OD,ID and length) to an accuracy of 5 microns.
2. Polarization to be clearly marked (for example OD North).
3. Stability characteristics of the magnet
4. Typical BH Curve of the Magnets
5. Reversible temperature coefficient data.

INNER RING MAGNET ASSY.

DRG.No.D/MAG/2010/IN



Notes:

1. All corners must be chamfered to 0.3x45°
2. The faces must be flat within 10micron
3. General tolerence ±0.025 where ever not specified

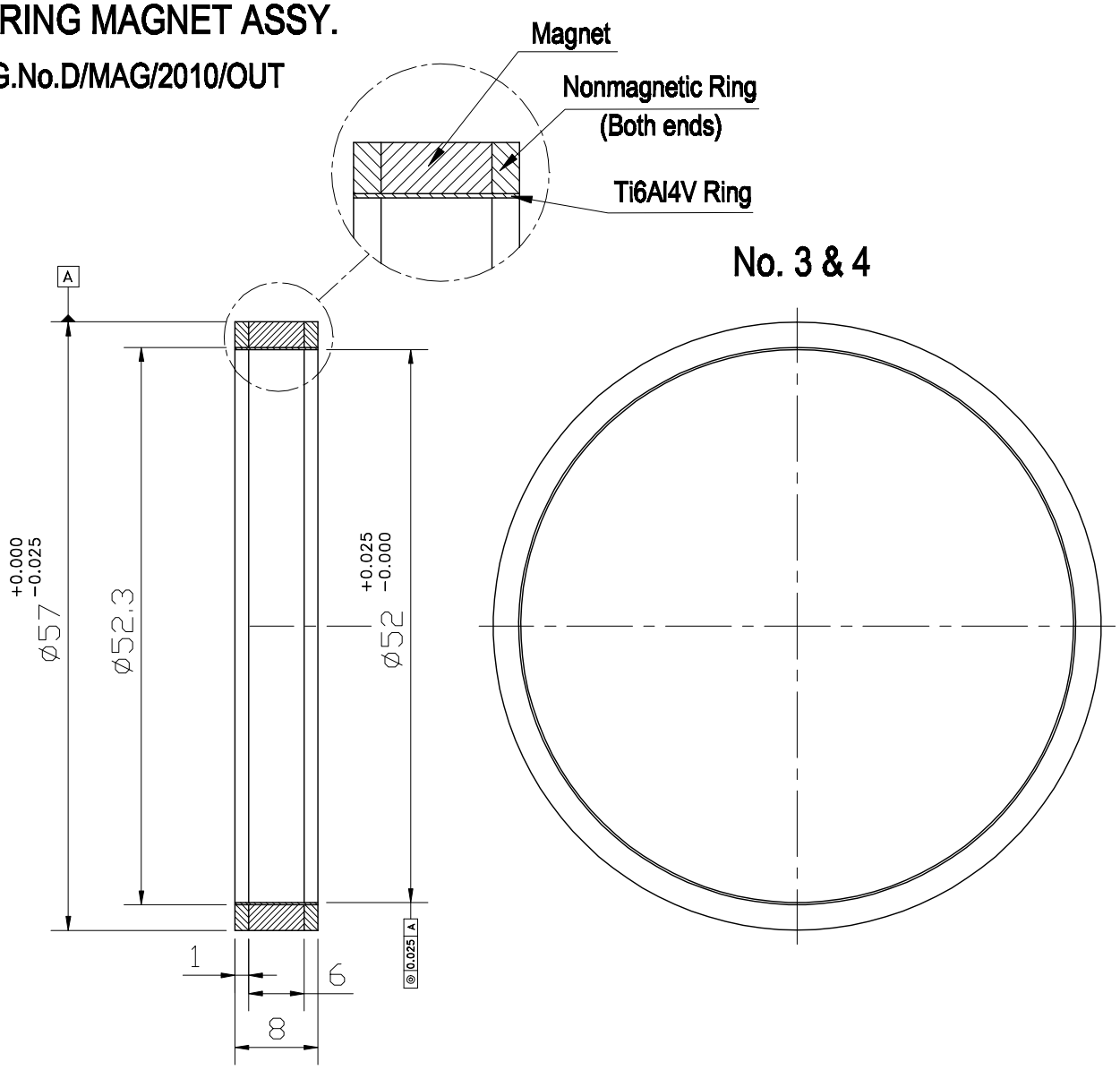
No. 1 : OD North, ID South - Polarity
No. 2 : OD South, ID North - Polarity

MAGNET MATERIAL - Rare earth cobalt

RADIAL OPERATION - Outer diameter forms one magnetic pole and Inner diameter forms another magnetic pole

OUTER RING MAGNET ASSY.

DRG.No.D/MAG/2010/OUT



Notes:

1. All corners must be chamfered to 0.3x45°
2. The faces must be flat within 10micron
3. General tolerence ±0.025 where ever not specified

No. 3 : OD North, ID South - Polarity
NO. 4 : OD South, ID North - Polarity

MAGNET MATERIAL - Rare earth cobalt

RADIAL OPERATION - Outer diameter forms one magnetic pole and Inner diameter forms another magnetic pole