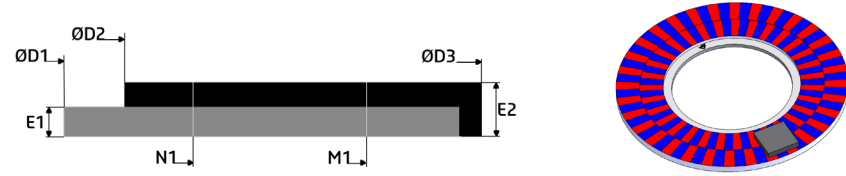


# AXIAL NONIUS MAGNET RINGS

## DATA SHEET FOR STANDARD PARTS



### MAGNETIC FEATURES

| ITEM | PARAMETER                                 | HUT128A32 | HUT128A64 | HUT150A32 | HUT150A64 | HUT200A16 | HUT200A32 | HUT220A32 | HUT200A64 |
|------|-------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| N1   | Number of pole pairs on Nonius track      | 31        | 63        | 31        | 63        | 15        | 31        | 31        | 63        |
|      | Scanning reading diameter of Nonius track | 18,88 mm  | 44,95 mm  | 23,36 mm  | 53,90 mm  | 12,40 mm  | 32,80 mm  | 36,82 mm  | 73,50 mm  |
|      | Pole width of Nonius track                | 0,96 mm   | 1,12 mm   | 1,18 mm   | 1,34 mm   | 1,30 mm   | 1,66 mm   | 1,87 mm   | 1,83 mm   |
| M1   | Number of pole pairs on master track      | 32        | 64        | 32        | 64        | 16        | 32        | 32        | 64        |
|      | Scanning reading diameter of master track | 26,08 mm  | 52,15 mm  | 30,56 mm  | 61,10 mm  | 20,40 mm  | 40,80 mm  | 44,82 mm  | 81,50 mm  |
|      | Pole width of master track                | 1,28 mm   | 1,28 mm   | 1,50 mm   | 1,50 mm   | 2,00 mm   | 2,00 mm   | 2,20 mm   | 2,00 mm   |

### > MATERIAL CHARACTERISTICS

|    |                                          |           |
|----|------------------------------------------|-----------|
| Br | Remanence @20°C                          | 190 mT    |
| Tc | Temperature coefficient of the remanence | -0,19 %/K |
|    | Coercitivity field                       | 240 KA/m  |

### > RECOMMENDED CHIP USAGE

| iC-Haus chips reference                                                       | iC-MU    | iC-MU    | iC-MU150 | iC-MU150 | iC-MU200 | iC-MU200 | iC-MU200 | iC-MU200 |
|-------------------------------------------------------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|
| Radial position of chip center<br><i>referred to axial center</i>             | 11,24 mm | 24,28 mm | 13,48 mm | 28,75 mm | 8,20 mm  | 18,40 mm | 20,41 mm | 38,75 mm |
| Recommended mechanical air gap<br><i>referred to magnetic coating surface</i> | 0,40 mm  | 0,40 mm  | 0,40 mm  | 0,40 mm  | 0,60 mm  | 0,60 mm  | 0,60 mm  | 0,60 mm  |
| LSB limit value under control (Min & Max)                                     | 60 %     |          |          |          |          |          |          |          |

### MECHANICAL FEATURES

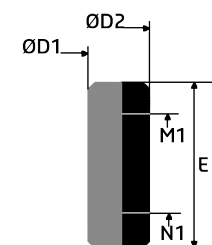
| HUTCHINSON PART NUMBER                          |                                       | 789890                                  | 789933                                  | 789837                                  | 789612                                 | 789880                                  | 789980                                  | 789985                                 | 789869                                  | 789909                                 | 789987                                  | 789932                                  |
|-------------------------------------------------|---------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|----------------------------------------|-----------------------------------------|-----------------------------------------|----------------------------------------|-----------------------------------------|----------------------------------------|-----------------------------------------|-----------------------------------------|
| ØD1                                             | Ring inner diameter (mm)              | 15,00 <sup>+0,03</sup> <sub>-0,02</sub> | 38,00 <sup>+0,03</sup> <sub>-0,02</sub> | 18,00 <sup>+0,03</sup> <sub>-0,02</sub> | 8,00 <sup>+0,03</sup> <sub>-0,02</sub> | 47,40 <sup>+0,03</sup> <sub>-0,02</sub> | 35,50 <sup>+0,03</sup> <sub>-0,02</sub> | 8,00 <sup>+0,03</sup> <sub>-0,02</sub> | 25,00 <sup>+0,05</sup> <sub>-0,00</sub> | 28,9 <sup>+0,03</sup> <sub>-0,02</sub> | 31,50 <sup>+0,025</sup> <sub>0,00</sub> | 62,00 <sup>+0,03</sup> <sub>-0,02</sub> |
| ØD2                                             | Magnetic track inner diameter (mm)    | 16,00 <sup>+0,1</sup> <sub>-0,1</sub>   | 41,00 <sup>+0,1</sup> <sub>-0,1</sub>   | 20,50 <sup>+0,1</sup> <sub>-0,1</sub>   | 20,50 <sup>+0,1</sup> <sub>-0,1</sub>  | 49,90 <sup>+0,1</sup> <sub>-0,1</sub>   | 49,90 <sup>+0,1</sup> <sub>-0,1</sub>   | 10,00 <sup>+0,1</sup> <sub>-0,1</sub>  | 29,10 <sup>+0,1</sup> <sub>-0,1</sub>   | 30,00 <sup>+0,1</sup> <sub>-0,1</sub>  | 32,80 <sup>+0,1</sup> <sub>-0,1</sub>   | 70,00 <sup>+0,1</sup> <sub>-0,1</sub>   |
| ØD3                                             | Ring outer diameter (mm)              | 29,00 <sup>+0,2</sup> <sub>-0,2</sub>   | 56,00 <sup>+0,2</sup> <sub>-0,2</sub>   | 34,50 <sup>+0,2</sup> <sub>-0,2</sub>   | 34,50 <sup>+0,2</sup> <sub>-0,2</sub>  | 65,10 <sup>+0,2</sup> <sub>-0,2</sub>   | 65,10 <sup>+0,2</sup> <sub>-0,2</sub>   | 24,00 <sup>+0,2</sup> <sub>-0,2</sub>  | 44,50 <sup>+0,2</sup> <sub>-0,2</sub>   | 44,50 <sup>+0,2</sup> <sub>-0,2</sub>  | 49,00 <sup>+0,1</sup> <sub>-0,05</sub>  | 85,00 <sup>+0,2</sup> <sub>-0,2</sub>   |
| E1                                              | Stainless steel insert thickness (mm) | 0,60                                    | 0,60                                    | 0,60                                    | 0,60                                   | 0,60                                    | 0,60                                    | 0,50                                   | 0,60                                    | 0,60                                   | 2                                       | 1                                       |
| E2                                              | Total thickness (mm)                  | 1,10 <sup>+0,1</sup> <sub>-0,1</sub>    | 1,10 <sup>+0,1</sup> <sub>-0,1</sub>    | 1,10 <sup>+0,1</sup> <sub>-0,1</sub>    | 1,10 <sup>+0,1</sup> <sub>-0,1</sub>   | 1,10 <sup>+0,1</sup> <sub>-0,1</sub>    | 1,10 <sup>+0,1</sup> <sub>-0,1</sub>    | 1,30 <sup>+0,1</sup> <sub>-0,1</sub>   | 1,40 <sup>+0,1</sup> <sub>-0,1</sub>    | 1,40 <sup>+0,1</sup> <sub>-0,1</sub>   | 2,00 <sup>+0,1</sup> <sub>-0,1</sub>    | 1,80 <sup>+0,1</sup> <sub>-0,1</sub>    |
| Magnet ring operating ambient temperature range |                                       | -40 to 140 °C                           |                                         |                                         |                                        |                                         |                                         |                                        |                                         |                                        |                                         |                                         |

*External fields can change the functional properties and may reduce system accuracy or damage the disc magnetization. The functionality of the system may no longer be ensured.  
Direct contact with magnetic clamps or other permanent magnets must be avoided.*

# RADIAL NONIUS MAGNET RINGS

## DATA SHEET FOR STANDARD PARTS

| MAGNETIC FEATURES                                                             |                                           |               |                 |           |                |        |                |
|-------------------------------------------------------------------------------|-------------------------------------------|---------------|-----------------|-----------|----------------|--------|----------------|
| ITEM                                                                          | PARAMETER                                 | HUT128R32     |                 | HUT150R64 |                |        |                |
| N1                                                                            | Number of pole pairs on Nonius track      | 31            |                 | 63        | 63             |        |                |
|                                                                               | Scanning reading position of Nonius track | 1,2 mm        |                 | 2,2 mm    | 1,7 mm         |        |                |
|                                                                               | Pole width of Nonius track (°)            | 360/62        |                 | 360/126   | 360/126        |        |                |
| M1                                                                            | Number of pole pairs on master track      | 32            |                 | 64        | 64             |        |                |
|                                                                               | Scanning reading position of master track | 4,8 mm        |                 | 5,8 mm    | 5,3 mm         |        |                |
|                                                                               | Pole width of master track (°)            | 360/64        |                 | 360/128   | 360/128        |        |                |
| > MATERIAL CHARACTERISTICS                                                    |                                           |               |                 |           |                |        |                |
| Br                                                                            | Remanence @20°C                           | 190 mT        |                 |           |                |        |                |
| Tc                                                                            | Temperature coefficient of the remanence  | -0,19 %/K     |                 |           |                |        |                |
|                                                                               | Coercitivity field                        | 240 KA/m      |                 |           |                |        |                |
| > RECOMMENDED CHIP USAGE                                                      |                                           |               |                 |           |                |        |                |
| iC-Haus chips reference                                                       |                                           | iC-MU         |                 | iC-MU150  |                |        |                |
| Radial position of chip center<br><i>referred to axial center</i>             |                                           | 3 mm          |                 | 4 mm      | 3,5 mm         |        |                |
| Recommended mechanical air gap<br><i>referred to magnetic coating surface</i> |                                           | 0,40 mm       |                 | 0,40 mm   | 0,40 mm        |        |                |
| LSB limit value under control (Min & Max)                                     |                                           | 60 %          |                 |           |                |        |                |
| MECHANICAL FEATURES                                                           |                                           |               |                 |           |                |        |                |
| HUTCHINSON PART NUMBER                                                        |                                           | 789894        |                 | 789892    |                | 789951 |                |
| ØD1                                                                           | Ring inner diameter (mm)                  | 20,00         | +0,021<br>-0,00 | 53,10     | +0,03<br>-0,00 | 52,60  | +0,03<br>-0,00 |
| ØD2                                                                           | Ring outer diameter (mm)                  | 24,50         | +0,05<br>-0,05  | 59,60     | +0,15<br>-0,15 | 59,60  | +0,15<br>-0,15 |
| E                                                                             | Height (mm)                               | 6             | +0,1<br>-0,1    | 8         | +0,2<br>-0,0   | 7      | +0,2<br>-0,0   |
| Magnet ring operating ambient temperature range                               |                                           | -40 to 140 °C |                 |           |                |        |                |



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The functionality of the system may no longer be ensured. Direct contact with magnetic clamps or other permanent magnets must be avoided.

