TM Magnetic Transmission Drive (Parts for Non-Contact Magnetic Force Transmission)

Overview

- Feature
  - Magnetically induces torque generation amount
  - Ultra quiet operation
  - Can be used semi-permanently within the allowed range of use, due to its permanent magnet specification.
  - When abnormal load is applied, two magnets spin separately to work as a torque limiter.
  - Can be used in water.
  - No backlash.
  - Can be used semi-permanently within the allowed range of use, due to its permanent magnet specification.
  - Ultra quiet operation.

Selection Steps

1. According to transmission direction, select Perpendicular Type or Parallel Type.
2. Calculate the required quantity from the size and the distance of the workpiece to be conveyed.
3. Calculate the required torque from the weight and quantity of the workpiece to be conveyed.

Example of Use

- Example of Use
  - Two Rotating Shells
  - Conveyance Transmission
  - Bulkhead Transmission
  - Angle Conversion

Example

Ex) Transfer Line of Flat Panel Displays

Design Data

- Magnetic Flux Variation Rate by Temperature (Reference)
  - Temperature (°C)
  - Magnetic Flux Density (G)
  - Magnet Section
  - Material
  - Surface Treatment
  - Prevention Treatment

- Torque Rate by Distance Change (Reference)
  - Magnetic Flux Density by Distance
  - Hold Section
  - Magnet Section
  - Material
  - Surface Treatment
  - Prevention Treatment

- Cautions
  - No alteration is available for the magnet parts.
  - Strong impact may cause damage and lead to deterioration in magnetic force.
  - The following objects are negatively affected by strong magnetic field.
    - Portable Phones, PCs, Watches
    - Pagers
  - For its non-contact nature, not suitable for extremely high-speed rotation. (Max. Speed 1500rpm)

Example

- Perpendicular Type used
  - Magnets arranged at 90°.
  - Force is transmitted with TM Parallel Type

- Parallel Type
  - Magnets arranged in parallel.
  - Force is transmitted with TM Perpendicular Type

- Perpendicular Type Neodymium Bonded
  - Standard Torque
  - MDQ
  - MDY
  - Economy Torque
  - MEQ
  - MEY

Part Number

- Part Number
  - D
  - D1
  - D2
  - H
  - W
  - M
  - Allowable Torque [N·m]
  - Unit Price

- Perpendicular Type
  - MDQ 16 8 2.0 13 12 18.5 8 M3 0.013 0.032
  - MDY 22 10 12 18 17 23.5 12 M3 0.050 0.105
  - MDY 26 10 12 15 22 20 25.5 14 M4 0.068 0.136
  - MDY 35 12 16 20 22 29 34.0 22 M4 0.245 0.558

- Parallel Type
  - MDQ 35 12 15 20 22 29 34.0 22 M4 0.245 0.558

- Perpendicular Type and Parallel Type cannot be used in combination.
- Cannot be combined with other manufacturer’s products. Please be sure to order in sets of the compatible product types.

Part Number

- Perpendicular Type
  - MEQ 8 2.0 13 8 15 8 M3 0.005 0.012
  - MEY 10 2.0 15 10 20 10 M4 0.150 0.300
  - MEY 12 16 12 15 22 M4 0.422 0.833
  - MEY 15 20 16 20 26 M4 0.764 1.528

- Parallel Type
  - MEQ 8 2.0 13 8 15 8 M3 0.005 0.012
  - MEY 10 2.0 15 10 20 10 M4 0.150 0.300
  - MEY 12 16 12 15 22 M4 0.422 0.833

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