



|              |                        |
|--------------|------------------------|
| Part Number  | <b>HY KH 6018 E TA</b> |
| Bearing Size | 6018                   |

|                |                         |
|----------------|-------------------------|
| Bearing Series | KH                      |
| Ball Material  | Silicon Nitride (Si3N4) |
| Ring Material  | 100 Cr 6 (SAE 52100)    |

### Bearing Dimensions

|                                              |                      |        |
|----------------------------------------------|----------------------|--------|
| Bore Diameter                                | d [mm]               | 90     |
| Outer Diameter                               | D [mm]               | 140    |
| Bearing Width                                | B [mm]               | 24     |
| Pitch Circle Diameter                        | d <sub>m</sub> [mm]  | 112.9  |
| Ball Diameter                                | D <sub>w</sub> [mm]  | 11.906 |
| OD Inner Ring                                | d <sub>1</sub> [mm]  | 105.8  |
| OD Inner Ring (Open Side)                    | d <sub>2</sub> [mm]  | 104.1  |
| ID Outer Ring                                | D <sub>1</sub> [mm]  | 120.0  |
| ID Outer Ring (Open Side)                    | D <sub>2</sub> [mm]  | 125.0  |
| ID Outer Ring of Contact Surface             | D <sub>1z</sub> [mm] | 123.2  |
| ID Outer Ring (Open Side) of Contact Surface | D <sub>2z</sub> [mm] | 126.3  |
| Chamfer                                      | r <sub>s</sub> [mm]  | 1.5    |
| Chamfer (Open Side)                          | r <sub>1s</sub> [mm] | 0.6    |

### Geometrical Data

|                 |                    |       |
|-----------------|--------------------|-------|
| Number of Balls | Z [Qty.]           | 25    |
| Contact Angle   | α <sub>0</sub> [°] | 25    |
| Bearing Weight  | m [kg]             | 1.100 |

### Mating Part Dimensions

|                                          |                            |       |
|------------------------------------------|----------------------------|-------|
| Abutment Diameter Inner Ring             | d <sub>a,b</sub> min. [mm] | 97.9  |
| Abutment Diameter Outer Ring             | D <sub>a</sub> max. [mm]   | 133.3 |
| Abutment Diameter Outer Ring             | D <sub>b</sub> max. [mm]   | 134.3 |
| Chamfer Associated Component             | r <sub>a</sub> max. [mm]   | 1.5   |
| Chamfer Associated Component (Open Side) | r <sub>b</sub> max. [mm]   | 0.6   |
| Oil Nozzle Position                      | d <sub>r</sub> [mm]        | 109.5 |

### Bearing Load Ratings

|                            |                     |         |
|----------------------------|---------------------|---------|
| Dynamic Radial Load Rating | C <sub>r</sub> [N]  | 36,000  |
| Static Radial Load Rating  | C <sub>0r</sub> [N] | 28,500  |
| Fatigue Load Limit         | C <sub>ur</sub> [N] | 1,017.0 |

### Bearing RPM Ratings

|                                     |                             |        |
|-------------------------------------|-----------------------------|--------|
| Speed Value with Oil Lubrication    | n <sub>oil</sub> [1/min]    | 21,000 |
| Speed Value with Grease Lubrication | n <sub>grease</sub> [1/min] | 16,000 |

### Bearing Preload Data

|                        |                          |      |
|------------------------|--------------------------|------|
| Light Preload          | F <sub>v</sub> L [N]     | 300  |
| Light Axial Rigidity   | C <sub>ax</sub> L [N/μm] | 201  |
| Medium Preload         | F <sub>v</sub> M [N]     | 890  |
| Medium Axial Rigidity  | C <sub>ax</sub> M [N/μm] | 294  |
| Heavy Preload          | F <sub>v</sub> S [N]     | 1790 |
| Heavy Axial Rigidity   | C <sub>ax</sub> S [N/μm] | 380  |
| Minimum Spring Preload | F <sub>r</sub> [N]       | 1930 |

### Notes:

1. Position of the oiling Nozzle (d<sub>r</sub>) for bearings with TXM cage design upon request
2. The stated load and speed values are given for a spring preloaded single bearing with oil/air or oil mist lubrication. If specific applications differ, please consult correction factors and/or GMN Bearing USA engineers.