

# ISO 15312:2018-02 (E)

## Rolling bearings - Thermal speed rating - Calculation

---

<b>Contents</b>		<b>Page</b>
Foreword .....		iv
<b>1</b>	<b>Scope .....</b>	<b>1</b>
<b>2</b>	<b>Normative references .....</b>	<b>1</b>
<b>3</b>	<b>Terms and definitions .....</b>	<b>1</b>
<b>4</b>	<b>Symbols and units .....</b>	<b>3</b>
<b>5</b>	<b>Reference conditions .....</b>	<b>3</b>
5.1	General .....	3
5.2	Reference conditions determining the frictional heat generation .....	3
5.2.1	Reference temperatures .....	3
5.2.2	Reference load .....	4
5.2.3	Lubrication .....	4
5.2.4	Other reference conditions .....	4
5.3	Reference conditions determining the heat emission .....	5
5.3.1	Heat emitting reference surface area .....	5
5.3.2	Reference heat flow density .....	6
<b>6</b>	<b>Calculation of the thermal speed rating .....</b>	<b>7</b>
<b>Annex A (informative) Coefficients <math>f_{0r}</math> and <math>f_{1r}</math> .....</b>		<b>9</b>
<b>Annex B (informative) Explanatory notes .....</b>		<b>11</b>
<b>Annex C (informative) Thermal speed rating for rolling bearings with grease lubrication .....</b>		<b>12</b>
<b>Bibliography .....</b>		<b>13</b>