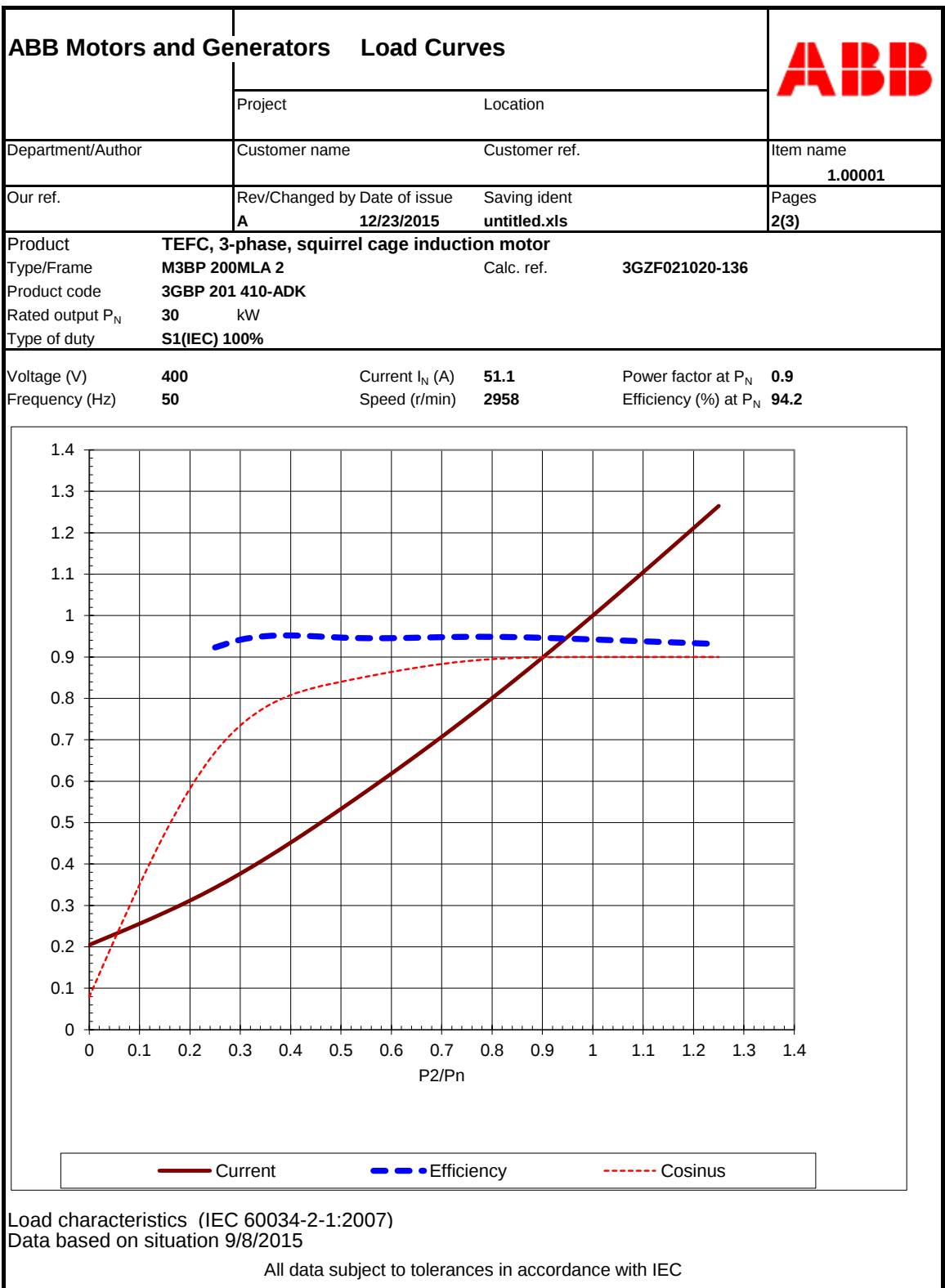
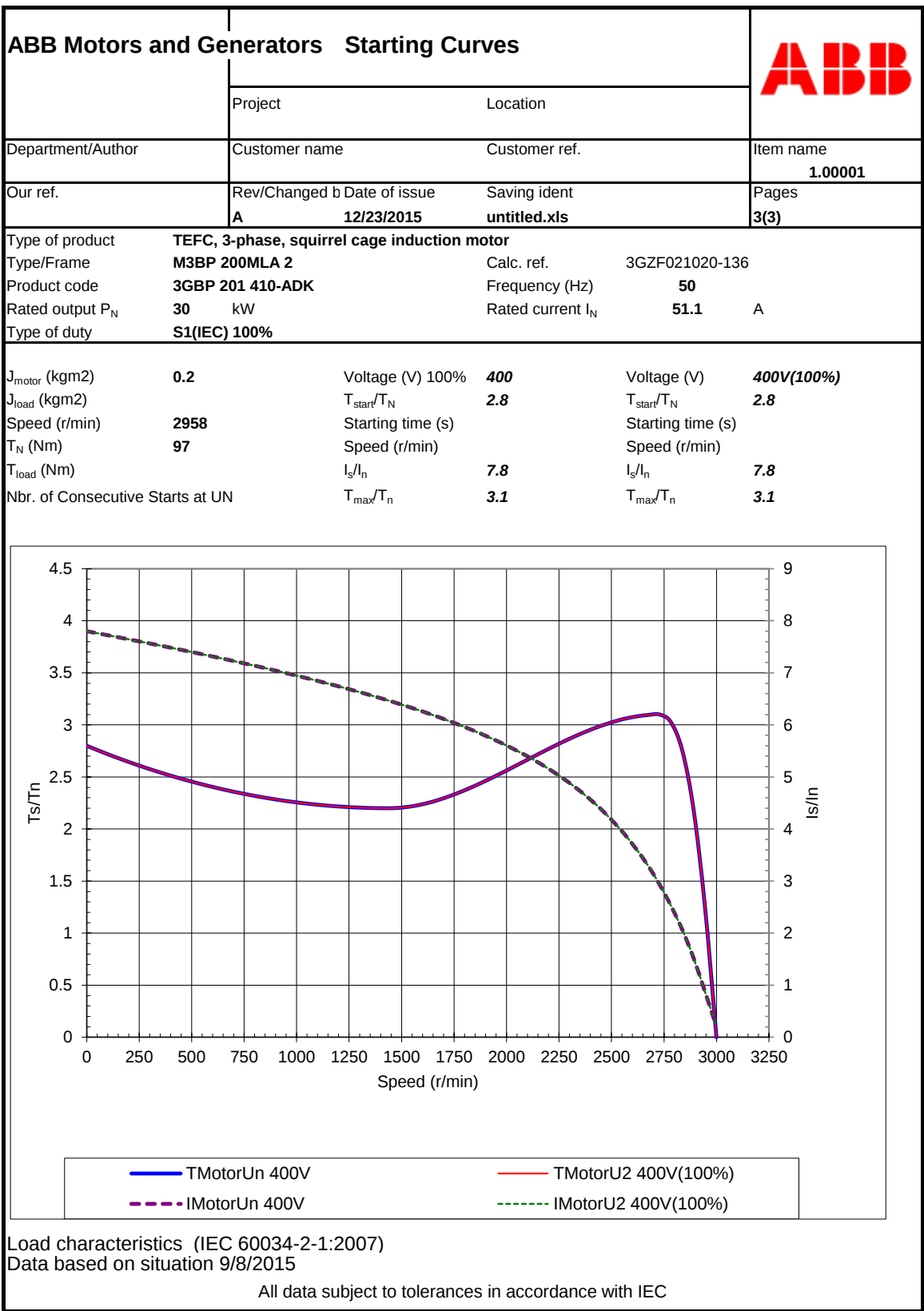
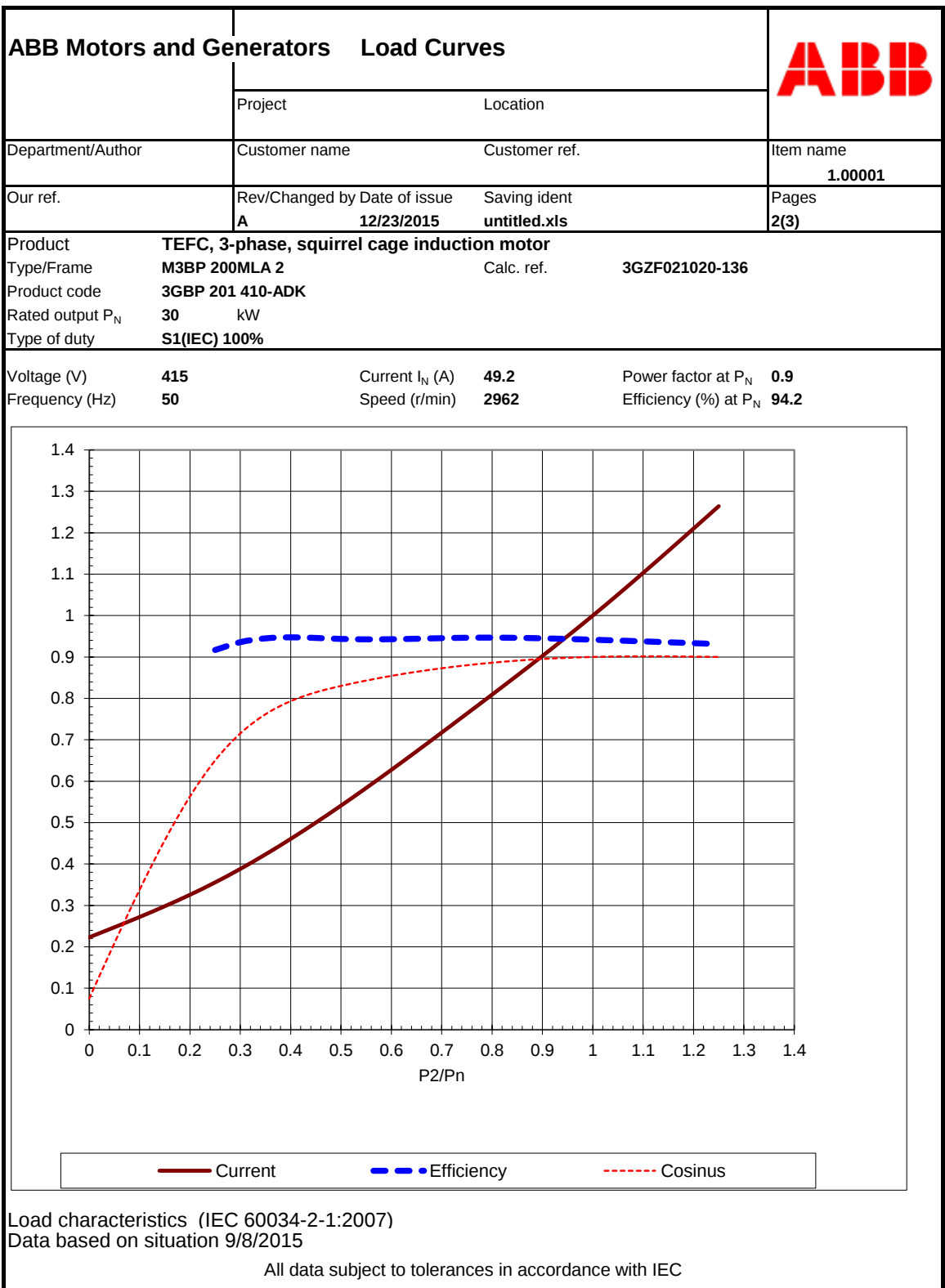


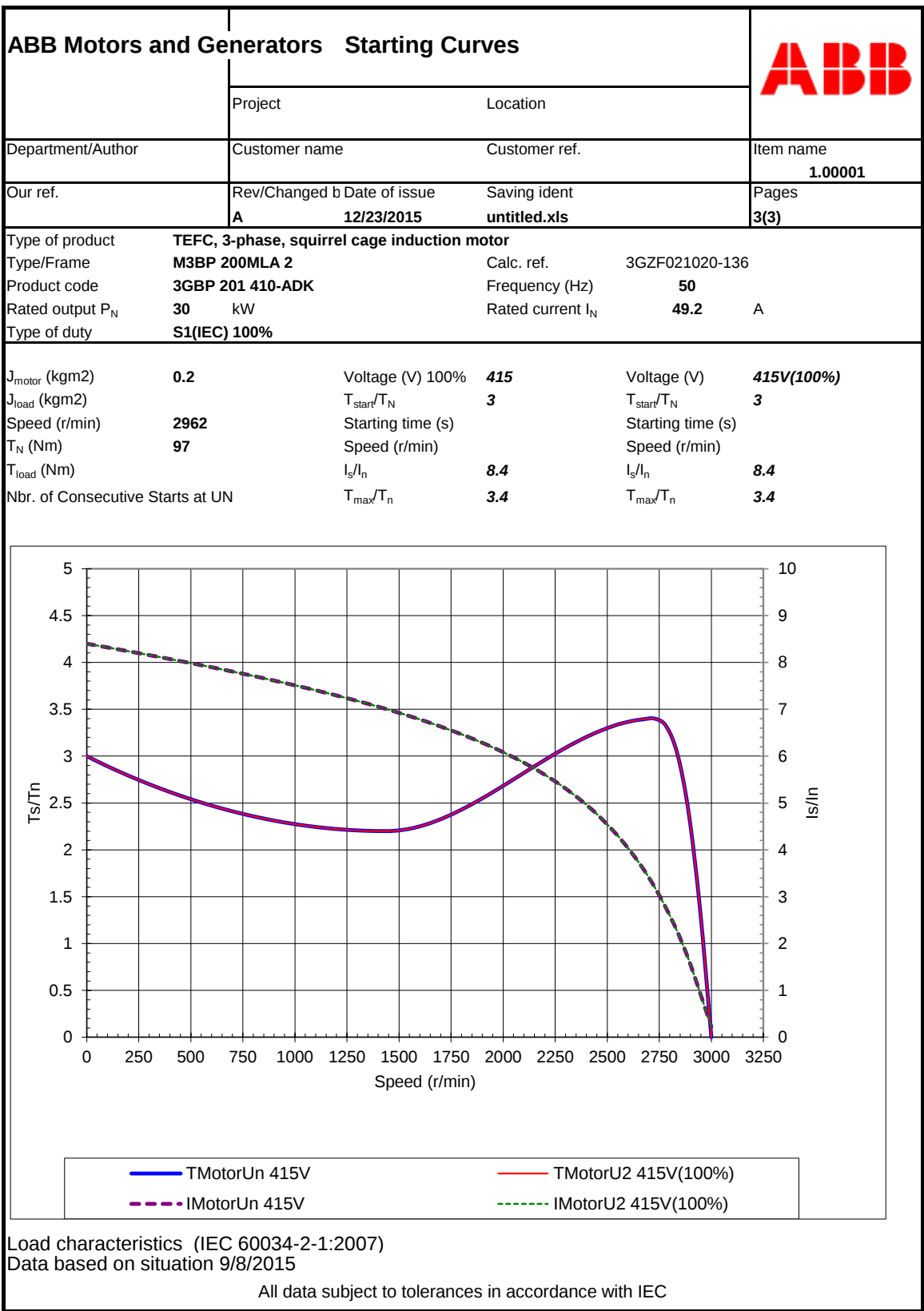
| ABB Motors and Generators                             |                                                                             | Technical Data Sheet - DOL                                   |                                     |  |
|-------------------------------------------------------|-----------------------------------------------------------------------------|--------------------------------------------------------------|-------------------------------------|-------------------------------------------------------------------------------------|
| Project                                               |                                                                             | Location                                                     |                                     |                                                                                     |
| Department/Author                                     | Customer name                                                               | Customer ref.                                                |                                     | Item name<br><b>1.00001</b>                                                         |
| Our ref.                                              | Rev/Changed by<br><b>A</b>                                                  | Date of issue<br><b>12/23/2015</b>                           | Saving ident<br><b>untitled.xls</b> | Pages<br><b>1(3)</b>                                                                |
| No.                                                   | Definition                                                                  | Data                                                         | Unit                                | Remarks                                                                             |
| 1                                                     | Product                                                                     | <b>TEFC, 3-phase, squirrel cage induction motor</b>          |                                     |                                                                                     |
| 2                                                     | Product code                                                                | <b>EMM20302-PPN (3GBP201410-A)</b> Calc. ref. 3GZF021020-136 |                                     |                                                                                     |
| 3                                                     | Type/Frame                                                                  | <b>M3BP 200MLA 2</b>                                         |                                     |                                                                                     |
| 4                                                     | Mounting                                                                    | <b>IM1001, B3(foot)</b>                                      |                                     |                                                                                     |
| 5                                                     | Rated output $P_N$                                                          | <b>30</b>                                                    | kW                                  |                                                                                     |
| 6                                                     | Service factor                                                              | <b>1</b>                                                     |                                     |                                                                                     |
| 7                                                     | Type of duty                                                                | <b>S1(IEC) 100%</b>                                          |                                     |                                                                                     |
| 8                                                     | Rated voltage $U_N$                                                         | <b>400</b>                                                   | VD                                  | $\pm 5\%$ (IEC 60034-1)                                                             |
| 9                                                     | Rated frequency $f_N$                                                       | <b>50</b>                                                    | Hz                                  | $\pm 2\%$ (IEC 60034-1)                                                             |
| 10                                                    | Rated speed $n_N$                                                           | <b>2958</b>                                                  | r/min                               |                                                                                     |
| 11                                                    | Rated current $I_N$                                                         | <b>51.1</b>                                                  | A                                   |                                                                                     |
| 12                                                    | No-load current                                                             | <b>10.4</b>                                                  | A                                   |                                                                                     |
| 13                                                    | Starting current $I_s/I_N$                                                  | <b>7.8</b>                                                   |                                     | Fullfilled IEC 60034-12 design N,H                                                  |
| 14                                                    | Nominal torque $T_N$                                                        | <b>97</b>                                                    | Nm                                  |                                                                                     |
| 15                                                    | Locked rotor torque $T_s/T_N$                                               | <b>2.8</b>                                                   |                                     |                                                                                     |
| 16                                                    | Maximum torque $T_{max}/T_N$                                                | <b>3.1</b>                                                   |                                     |                                                                                     |
| 17                                                    | Minimum torque $T_{min}/T_N$                                                | <b>2.2</b>                                                   |                                     |                                                                                     |
| 18                                                    | Speed at minimum torque                                                     | <b>1440</b>                                                  | r/min                               |                                                                                     |
| Load characteristics (IEC 60034-2-1:2007)             |                                                                             | Load %                                                       | Current A                           | Efficiency %                                                                        |
| 19                                                    | PLL determined from residual loss                                           | <b>100</b>                                                   | <b>51.1</b>                         | <b>94.2 / IE3</b>                                                                   |
| 20                                                    |                                                                             | <b>75</b>                                                    | <b>38.5</b>                         | <b>94.9</b>                                                                         |
| 21                                                    |                                                                             | <b>50</b>                                                    | <b>27.2</b>                         | <b>94.7</b>                                                                         |
| 22                                                    |                                                                             | <b>Start</b>                                                 | <b>398</b>                          | <b>0.39</b>                                                                         |
| 23                                                    | Maximum starting time from hot                                              | <b>15</b>                                                    | s                                   |                                                                                     |
| 24                                                    | Maximum starting time from cold                                             | <b>27</b>                                                    | s                                   |                                                                                     |
| 25                                                    | Insulation class / Temperature class                                        | <b>F / B</b>                                                 |                                     |                                                                                     |
| 26                                                    | Ambient temperature                                                         | <b>40</b>                                                    | °C                                  |                                                                                     |
| 27                                                    | Altitude                                                                    | <b>1000</b>                                                  | m.a.s.l.                            |                                                                                     |
| 28                                                    | Enclosure                                                                   | <b>IP55</b>                                                  |                                     |                                                                                     |
| 29                                                    | Cooling system                                                              | <b>IC411 self ventilated</b>                                 |                                     |                                                                                     |
| 30                                                    | Bearing DE/NDE                                                              | <b>6312/C3 - 6210/C3</b>                                     |                                     |                                                                                     |
| 31                                                    | Type of Grease                                                              |                                                              |                                     |                                                                                     |
| 32                                                    | Sound pressure level (LP dB(A) 1m)                                          | <b>72</b>                                                    | dB(A)                               | at load                                                                             |
| 33                                                    | Moment of inertia $J = \frac{1}{4} GD^2$                                    | <b>0.196</b>                                                 | kg-m2                               |                                                                                     |
| 34                                                    | Balancing                                                                   |                                                              |                                     |                                                                                     |
| 35                                                    | Vibration class                                                             |                                                              |                                     |                                                                                     |
| 36                                                    | Position of terminal box                                                    | <b>Top</b>                                                   |                                     |                                                                                     |
| 37                                                    | Terminal box entries; no, dimens.                                           |                                                              |                                     |                                                                                     |
| 38                                                    | Number of power terminals                                                   |                                                              |                                     |                                                                                     |
| 39                                                    | Direction of rotation                                                       | <b>CW or CCW</b>                                             |                                     |                                                                                     |
| 40                                                    | Weight of rotor                                                             | <b>61</b>                                                    | kg                                  |                                                                                     |
| 41                                                    | Total weight of motor                                                       | <b>289</b>                                                   | kg                                  |                                                                                     |
| 42                                                    | Dimension drawing no.                                                       |                                                              |                                     |                                                                                     |
| 43                                                    |                                                                             |                                                              |                                     |                                                                                     |
| 44                                                    |                                                                             |                                                              |                                     |                                                                                     |
| 45                                                    |                                                                             |                                                              |                                     |                                                                                     |
| Ex-motors                                             |                                                                             |                                                              |                                     |                                                                                     |
| 46                                                    |                                                                             |                                                              |                                     |                                                                                     |
| 47                                                    |                                                                             |                                                              |                                     |                                                                                     |
| 48                                                    |                                                                             |                                                              |                                     |                                                                                     |
| Option Variant Codes / Definition                     |                                                                             |                                                              |                                     |                                                                                     |
| 49                                                    | +011 Fulfilling CSA Energy Efficiency Verification IE3 (code 010 included). |                                                              |                                     |                                                                                     |
| 50                                                    | +332 Baldor Catalogue #                                                     |                                                              |                                     |                                                                                     |
| 51                                                    | +509 Fulfilling EISA Subtype I efficiency requirements, CC031A              |                                                              |                                     |                                                                                     |
| 52                                                    |                                                                             |                                                              |                                     |                                                                                     |
| Remarks:                                              |                                                                             |                                                              |                                     |                                                                                     |
| Data based on situation 9/8/2015                      |                                                                             |                                                              |                                     |                                                                                     |
| All data subject to tolerances in accordance with IEC |                                                                             |                                                              |                                     |                                                                                     |
| Guaranteed values on request                          |                                                                             |                                                              |                                     |                                                                                     |



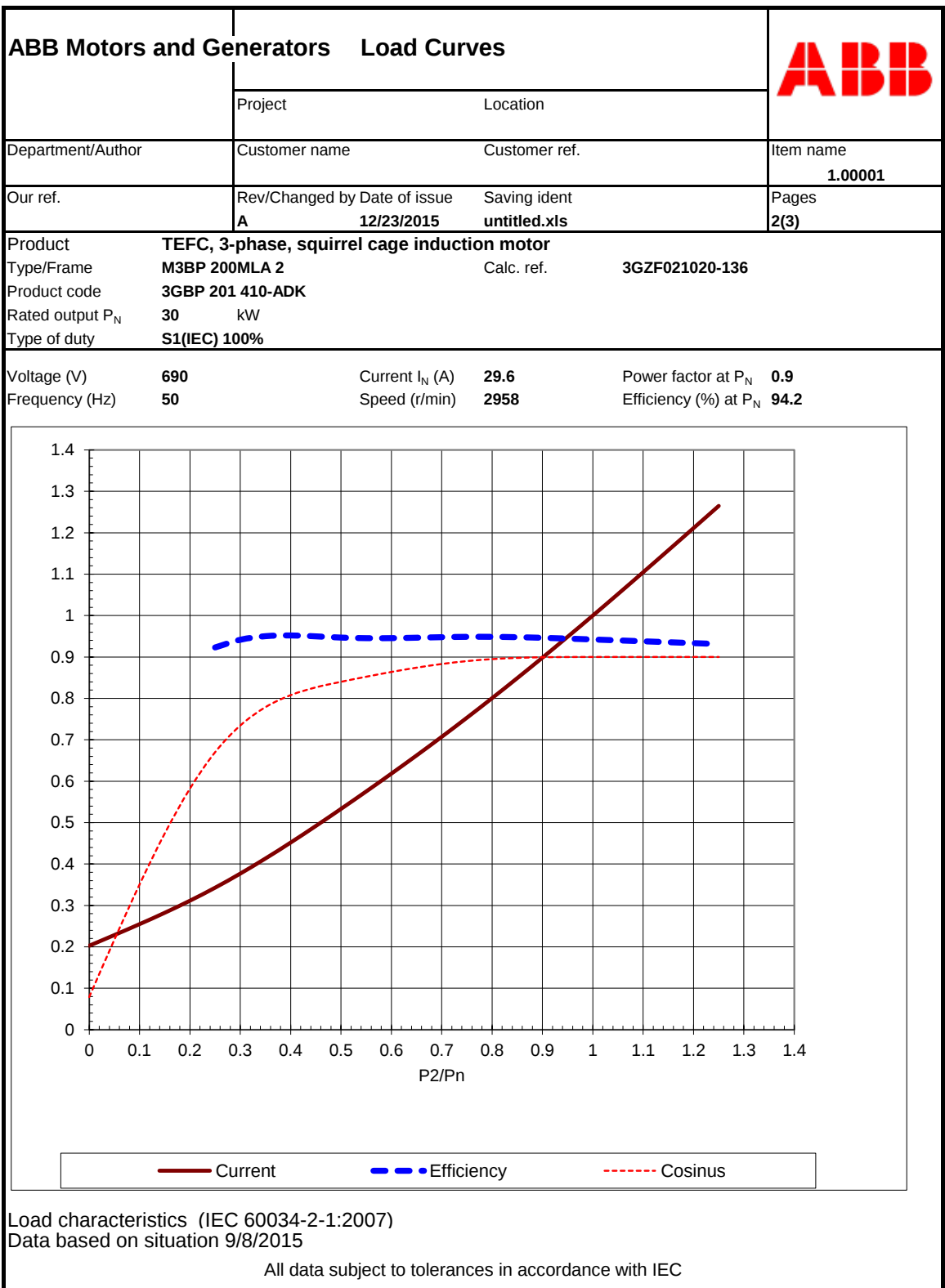


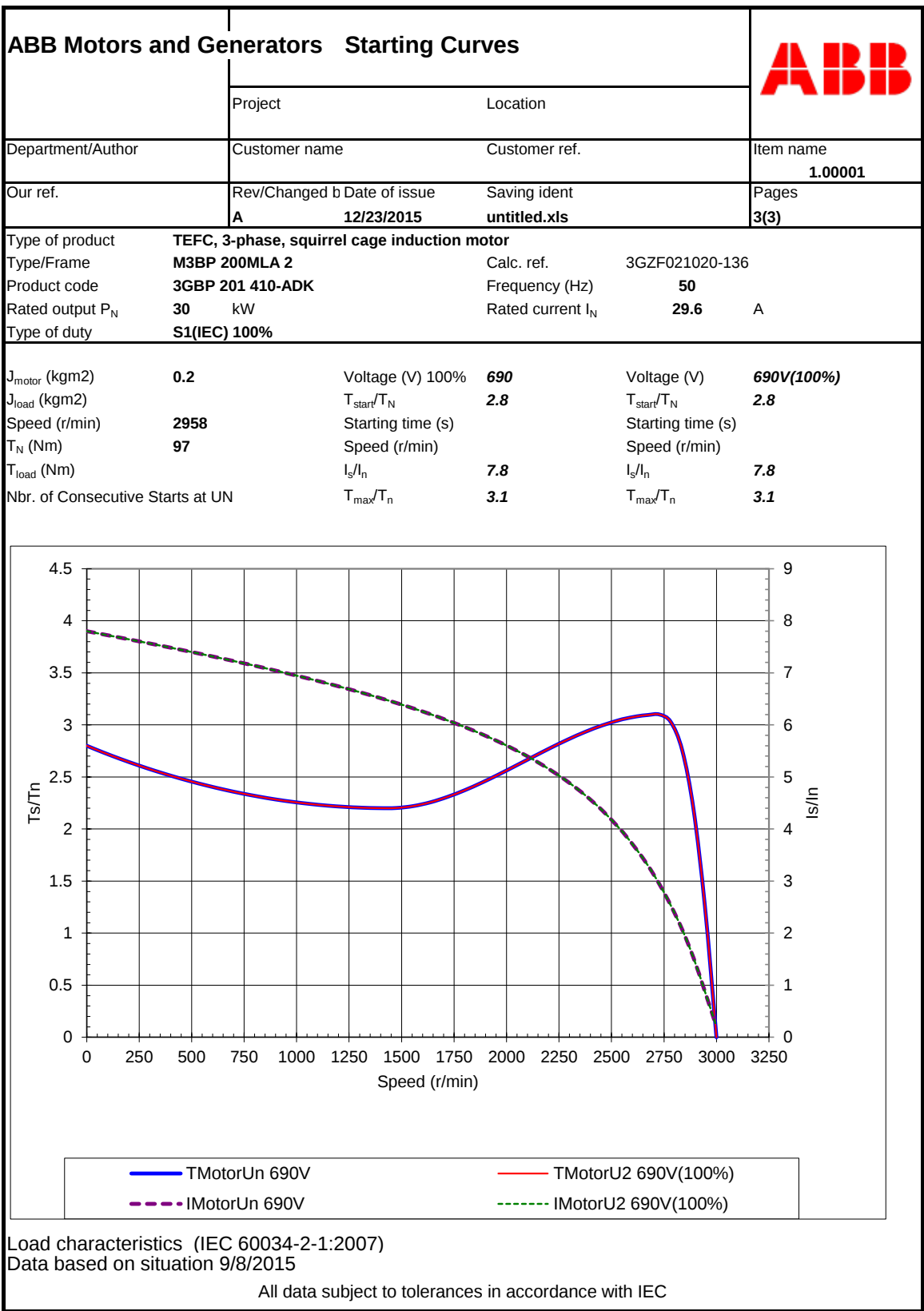
| ABB Motors and Generators                             |                                                                             | Technical Data Sheet - DOL                                   |                                     |  |
|-------------------------------------------------------|-----------------------------------------------------------------------------|--------------------------------------------------------------|-------------------------------------|-------------------------------------------------------------------------------------|
| Project                                               |                                                                             | Location                                                     |                                     |                                                                                     |
| Department/Author                                     | Customer name                                                               | Customer ref.                                                |                                     | Item name<br><b>1.00001</b>                                                         |
| Our ref.                                              | Rev/Changed by<br><b>A</b>                                                  | Date of issue<br><b>12/23/2015</b>                           | Saving ident<br><b>untitled.xls</b> | Pages<br><b>1(3)</b>                                                                |
| No.                                                   | Definition                                                                  | Data                                                         | Unit                                | Remarks                                                                             |
| 1                                                     | Product                                                                     | <b>TEFC, 3-phase, squirrel cage induction motor</b>          |                                     |                                                                                     |
| 2                                                     | Product code                                                                | <b>EMM20302-PPN (3GBP201410-A)</b> Calc. ref. 3GZF021020-136 |                                     |                                                                                     |
| 3                                                     | Type/Frame                                                                  | <b>M3BP 200MLA 2</b>                                         |                                     |                                                                                     |
| 4                                                     | Mounting                                                                    | <b>IM1001, B3(foot)</b>                                      |                                     |                                                                                     |
| 5                                                     | Rated output $P_N$                                                          | <b>30</b>                                                    | kW                                  |                                                                                     |
| 6                                                     | Service factor                                                              | <b>1</b>                                                     |                                     |                                                                                     |
| 7                                                     | Type of duty                                                                | <b>S1(IEC) 100%</b>                                          |                                     |                                                                                     |
| 8                                                     | Rated voltage $U_N$                                                         | <b>415</b>                                                   | VD                                  | ± 5 % (IEC 60034-1)                                                                 |
| 9                                                     | Rated frequency $f_N$                                                       | <b>50</b>                                                    | Hz                                  | ± 2 % (IEC 60034-1)                                                                 |
| 10                                                    | Rated speed $n_N$                                                           | <b>2962</b>                                                  | r/min                               |                                                                                     |
| 11                                                    | Rated current $I_N$                                                         | <b>49.2</b>                                                  | A                                   |                                                                                     |
| 12                                                    | No-load current                                                             | <b>11</b>                                                    | A                                   |                                                                                     |
| 13                                                    | Starting current $I_s/I_N$                                                  | <b>8.4</b>                                                   |                                     | Fullfilled IEC 60034-12 design N,H                                                  |
| 14                                                    | Nominal torque $T_N$                                                        | <b>97</b>                                                    | Nm                                  |                                                                                     |
| 15                                                    | Locked rotor torque $T_s/T_N$                                               | <b>3</b>                                                     |                                     |                                                                                     |
| 16                                                    | Maximum torque $T_{max}/T_N$                                                | <b>3.4</b>                                                   |                                     |                                                                                     |
| 17                                                    | Minimum torque $T_{min}/T_N$                                                | <b>2.2</b>                                                   |                                     |                                                                                     |
| 18                                                    | Speed at minimum torque                                                     | <b>1440</b>                                                  | r/min                               |                                                                                     |
| Load characteristics (IEC 60034-2-1:2007)             |                                                                             | Load %                                                       | Current A                           | Efficiency %                                                                        |
| 19                                                    | PLL determined from residual loss                                           | <b>100</b>                                                   | <b>49.2</b>                         | <b>94.2 / IE3</b>                                                                   |
| 20                                                    |                                                                             | <b>75</b>                                                    | <b>37.6</b>                         | <b>94.6</b>                                                                         |
| 21                                                    |                                                                             | <b>50</b>                                                    | <b>26.6</b>                         | <b>94.4</b>                                                                         |
| 22                                                    |                                                                             | <b>Start</b>                                                 | <b>414</b>                          | <b>0.39</b>                                                                         |
| 23                                                    | Maximum starting time from hot                                              | <b>15</b>                                                    | s                                   |                                                                                     |
| 24                                                    | Maximum starting time from cold                                             | <b>27</b>                                                    | s                                   |                                                                                     |
| 25                                                    | Insulation class / Temperature class                                        | <b>F / B</b>                                                 |                                     |                                                                                     |
| 26                                                    | Ambient temperature                                                         | <b>40</b>                                                    | °C                                  |                                                                                     |
| 27                                                    | Altitude                                                                    | <b>1000</b>                                                  | m.a.s.l.                            |                                                                                     |
| 28                                                    | Enclosure                                                                   | <b>IP55</b>                                                  |                                     |                                                                                     |
| 29                                                    | Cooling system                                                              | <b>IC411 self ventilated</b>                                 |                                     |                                                                                     |
| 30                                                    | Bearing DE/NDE                                                              | <b>6312/C3 - 6210/C3</b>                                     |                                     |                                                                                     |
| 31                                                    | Type of Grease                                                              |                                                              |                                     |                                                                                     |
| 32                                                    | Sound pressure level (LP dB(A) 1m)                                          | <b>72</b>                                                    | dB(A)                               | at load                                                                             |
| 33                                                    | Moment of inertia $J = \frac{1}{4} GD^2$                                    | <b>0.196</b>                                                 | kg-m2                               |                                                                                     |
| 34                                                    | Balancing                                                                   |                                                              |                                     |                                                                                     |
| 35                                                    | Vibration class                                                             |                                                              |                                     |                                                                                     |
| 36                                                    | Position of terminal box                                                    | <b>Top</b>                                                   |                                     |                                                                                     |
| 37                                                    | Terminal box entries; no, dimens.                                           |                                                              |                                     |                                                                                     |
| 38                                                    | Number of power terminals                                                   |                                                              |                                     |                                                                                     |
| 39                                                    | Direction of rotation                                                       | <b>CW or CCW</b>                                             |                                     |                                                                                     |
| 40                                                    | Weight of rotor                                                             | <b>61</b>                                                    | kg                                  |                                                                                     |
| 41                                                    | Total weight of motor                                                       | <b>289</b>                                                   | kg                                  |                                                                                     |
| 42                                                    | Dimension drawing no.                                                       |                                                              |                                     |                                                                                     |
| 43                                                    |                                                                             |                                                              |                                     |                                                                                     |
| 44                                                    |                                                                             |                                                              |                                     |                                                                                     |
| 45                                                    |                                                                             |                                                              |                                     |                                                                                     |
| Ex-motors                                             |                                                                             |                                                              |                                     |                                                                                     |
| 46                                                    |                                                                             |                                                              |                                     |                                                                                     |
| 47                                                    |                                                                             |                                                              |                                     |                                                                                     |
| 48                                                    |                                                                             |                                                              |                                     |                                                                                     |
| Option Variant Codes / Definition                     |                                                                             |                                                              |                                     |                                                                                     |
| 49                                                    | +011 Fulfilling CSA Energy Efficiency Verification IE3 (code 010 included). |                                                              |                                     |                                                                                     |
| 50                                                    | +332 Baldor Catalogue #                                                     |                                                              |                                     |                                                                                     |
| 51                                                    | +509 Fulfilling EISA Subtype I efficiency requirements, CC031A              |                                                              |                                     |                                                                                     |
| 52                                                    |                                                                             |                                                              |                                     |                                                                                     |
| Remarks:                                              |                                                                             |                                                              |                                     |                                                                                     |
| Data based on situation 9/8/2015                      |                                                                             |                                                              |                                     |                                                                                     |
| All data subject to tolerances in accordance with IEC |                                                                             |                                                              |                                     |                                                                                     |
| Guaranteed values on request                          |                                                                             |                                                              |                                     |                                                                                     |



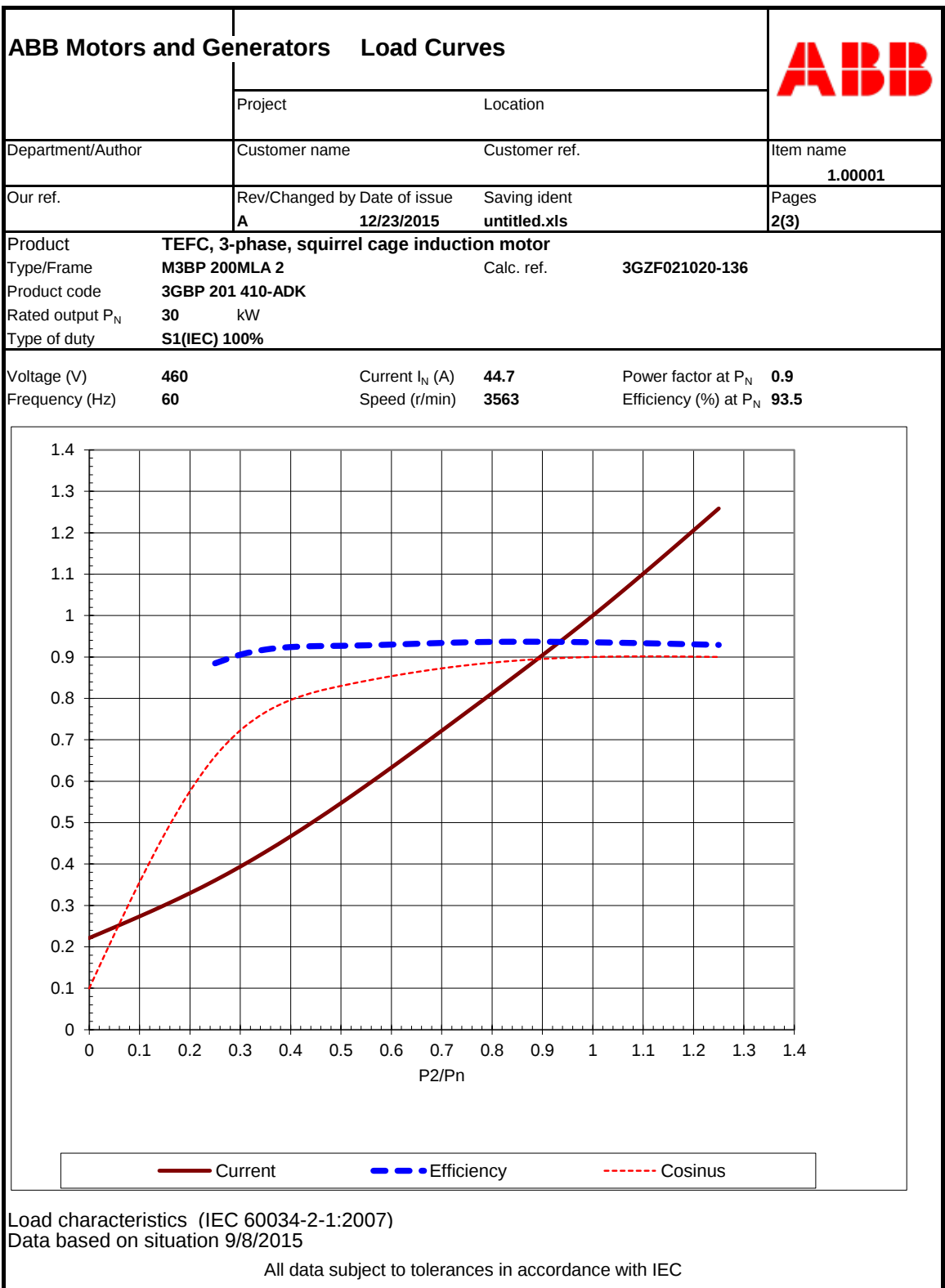


| ABB Motors and Generators                             |                                                                             | Technical Data Sheet - DOL                            |                             |  |
|-------------------------------------------------------|-----------------------------------------------------------------------------|-------------------------------------------------------|-----------------------------|-------------------------------------------------------------------------------------|
| Project                                               |                                                                             | Location                                              |                             |                                                                                     |
| Department/Author                                     |                                                                             | Customer name                                         |                             | Customer ref.                                                                       |
| Our ref.                                              |                                                                             | Rev/Changed by<br>A                                   | Date of issue<br>12/23/2015 | Saving ident<br>untitled.xls                                                        |
|                                                       |                                                                             |                                                       |                             | Item name<br>1.00001                                                                |
|                                                       |                                                                             |                                                       |                             | Pages<br>1(3)                                                                       |
| No.                                                   | Definition                                                                  | Data                                                  | Unit                        | Remarks                                                                             |
| 1                                                     | Product                                                                     | TEFC, 3-phase, squirrel cage induction motor          |                             |                                                                                     |
| 2                                                     | Product code                                                                | EMM20302-PPN (3GBP201410-A) Calc. ref. 3GZF021020-136 |                             |                                                                                     |
| 3                                                     | Type/Frame                                                                  | M3BP 200MLA 2                                         |                             |                                                                                     |
| 4                                                     | Mounting                                                                    | IM1001, B3(foot)                                      |                             |                                                                                     |
| 5                                                     | Rated output P <sub>N</sub>                                                 | 30                                                    | kW                          |                                                                                     |
| 6                                                     | Service factor                                                              | 1                                                     |                             |                                                                                     |
| 7                                                     | Type of duty                                                                | S1(IEC) 100%                                          |                             |                                                                                     |
| 8                                                     | Rated voltage U <sub>N</sub>                                                | 690                                                   | VY                          | ± 5 % (IEC 60034-1)                                                                 |
| 9                                                     | Rated frequency f <sub>N</sub>                                              | 50                                                    | Hz                          | ± 2 % (IEC 60034-1)                                                                 |
| 10                                                    | Rated speed n <sub>N</sub>                                                  | 2958                                                  | r/min                       |                                                                                     |
| 11                                                    | Rated current I <sub>N</sub>                                                | 29.6                                                  | A                           |                                                                                     |
| 12                                                    | No-load current                                                             | 6                                                     | A                           |                                                                                     |
| 13                                                    | Starting current I <sub>s</sub> /I <sub>N</sub>                             | 7.8                                                   |                             | Fullfilled IEC 60034-12 design N,H                                                  |
| 14                                                    | Nominal torque T <sub>N</sub>                                               | 97                                                    | Nm                          |                                                                                     |
| 15                                                    | Locked rotor torque T <sub>s</sub> /T <sub>N</sub>                          | 2.8                                                   |                             |                                                                                     |
| 16                                                    | Maximum torque T <sub>max</sub> /T <sub>N</sub>                             | 3.1                                                   |                             |                                                                                     |
| 17                                                    | Minimum torque T <sub>min</sub> /T <sub>N</sub>                             | 2.2                                                   |                             |                                                                                     |
| 18                                                    | Speed at minimum torque                                                     | 1440                                                  | r/min                       |                                                                                     |
| Load characteristics (IEC 60034-2-1:2007)             |                                                                             | Load %                                                | Current A                   | Efficiency %                                                                        |
| 19                                                    | PLL determined from residual loss                                           | 100                                                   | 29.6                        | 94.2 / IE3                                                                          |
| 20                                                    |                                                                             | 75                                                    | 22.3                        | 94.9                                                                                |
| 21                                                    |                                                                             | 50                                                    | 15.8                        | 94.7                                                                                |
| 22                                                    |                                                                             | Start                                                 | 231                         | 0.39                                                                                |
| 23                                                    | Maximum starting time from hot                                              | 15                                                    | s                           |                                                                                     |
| 24                                                    | Maximum starting time from cold                                             | 27                                                    | s                           |                                                                                     |
| 25                                                    | Insulation class / Temperature class                                        | F / B                                                 |                             |                                                                                     |
| 26                                                    | Ambient temperature                                                         | 40                                                    | °C                          |                                                                                     |
| 27                                                    | Altitude                                                                    | 1000                                                  | m.a.s.l.                    |                                                                                     |
| 28                                                    | Enclosure                                                                   | IP55                                                  |                             |                                                                                     |
| 29                                                    | Cooling system                                                              | IC411 self ventilated                                 |                             |                                                                                     |
| 30                                                    | Bearing DE/NDE                                                              | 6312/C3 - 6210/C3                                     |                             |                                                                                     |
| 31                                                    | Type of Grease                                                              |                                                       |                             |                                                                                     |
| 32                                                    | Sound pressure level (LP dB(A) 1m)                                          | 72                                                    | dB(A)                       | at load                                                                             |
| 33                                                    | Moment of inertia J = ¼ GD2                                                 | 0.196                                                 | kg-m2                       |                                                                                     |
| 34                                                    | Balancing                                                                   |                                                       |                             |                                                                                     |
| 35                                                    | Vibration class                                                             |                                                       |                             |                                                                                     |
| 36                                                    | Position of terminal box                                                    | Top                                                   |                             |                                                                                     |
| 37                                                    | Terminal box entries; no, dimens.                                           |                                                       |                             |                                                                                     |
| 38                                                    | Number of power terminals                                                   |                                                       |                             |                                                                                     |
| 39                                                    | Direction of rotation                                                       | CW or CCW                                             |                             |                                                                                     |
| 40                                                    | Weight of rotor                                                             | 61                                                    | kg                          |                                                                                     |
| 41                                                    | Total weight of motor                                                       | 289                                                   | kg                          |                                                                                     |
| 42                                                    | Dimension drawing no.                                                       |                                                       |                             |                                                                                     |
| 43                                                    |                                                                             |                                                       |                             |                                                                                     |
| 44                                                    |                                                                             |                                                       |                             |                                                                                     |
| 45                                                    |                                                                             |                                                       |                             |                                                                                     |
| Ex-motors                                             |                                                                             |                                                       |                             |                                                                                     |
| 46                                                    |                                                                             |                                                       |                             |                                                                                     |
| 47                                                    |                                                                             |                                                       |                             |                                                                                     |
| 48                                                    |                                                                             |                                                       |                             |                                                                                     |
| Option Variant Codes / Definition                     |                                                                             |                                                       |                             |                                                                                     |
| 49                                                    | +011 Fulfilling CSA Energy Efficiency Verification IE3 (code 010 included). |                                                       |                             |                                                                                     |
| 50                                                    | +332 Baldor Catalogue #                                                     |                                                       |                             |                                                                                     |
| 51                                                    | +509 Fulfilling EISA Subtype I efficiency requirements, CC031A              |                                                       |                             |                                                                                     |
| 52                                                    |                                                                             |                                                       |                             |                                                                                     |
| Remarks:                                              |                                                                             |                                                       |                             |                                                                                     |
| Data based on situation 9/8/2015                      |                                                                             |                                                       |                             |                                                                                     |
| All data subject to tolerances in accordance with IEC |                                                                             |                                                       |                             |                                                                                     |
| Guaranteed values on request                          |                                                                             |                                                       |                             |                                                                                     |





| ABB Motors and Generators                             |                                                                             | Technical Data Sheet - DOL                                   |                                    |  |
|-------------------------------------------------------|-----------------------------------------------------------------------------|--------------------------------------------------------------|------------------------------------|-------------------------------------------------------------------------------------|
| Project                                               |                                                                             | Location                                                     |                                    |                                                                                     |
| Department/Author                                     |                                                                             | Customer name                                                |                                    | Customer ref.                                                                       |
| Our ref.                                              |                                                                             | Rev/Changed by<br><b>A</b>                                   | Date of issue<br><b>12/23/2015</b> | Saving ident<br><b>untitled.xls</b>                                                 |
|                                                       |                                                                             |                                                              |                                    | Item name<br><b>1.00001</b>                                                         |
|                                                       |                                                                             |                                                              |                                    | Pages<br><b>1(3)</b>                                                                |
| No.                                                   | Definition                                                                  | Data                                                         | Unit                               | Remarks                                                                             |
| 1                                                     | Product                                                                     | <b>TEFC, 3-phase, squirrel cage induction motor</b>          |                                    |                                                                                     |
| 2                                                     | Product code                                                                | <b>EMM20302-PPN (3GBP201410-A)</b> Calc. ref. 3GZF021020-136 |                                    |                                                                                     |
| 3                                                     | Type/Frame                                                                  | <b>M3BP 200MLA 2</b>                                         |                                    |                                                                                     |
| 4                                                     | Mounting                                                                    | <b>IM1001, B3(foot)</b>                                      |                                    |                                                                                     |
| 5                                                     | Rated output $P_N$                                                          | <b>30</b>                                                    | kW                                 |                                                                                     |
| 6                                                     | Service factor                                                              | <b>1</b>                                                     |                                    |                                                                                     |
| 7                                                     | Type of duty                                                                | <b>S1(IEC) 100%</b>                                          |                                    |                                                                                     |
| 8                                                     | Rated voltage $U_N$                                                         | <b>460</b>                                                   | VD                                 | ± 5 % (IEC 60034-1)                                                                 |
| 9                                                     | Rated frequency $f_N$                                                       | <b>60</b>                                                    | Hz                                 | ± 2 % (IEC 60034-1)                                                                 |
| 10                                                    | Rated speed $n_N$                                                           | <b>3563</b>                                                  | r/min                              |                                                                                     |
| 11                                                    | Rated current $I_N$                                                         | <b>44.7</b>                                                  | A                                  |                                                                                     |
| 12                                                    | No-load current                                                             | <b>9.9</b>                                                   | A                                  |                                                                                     |
| 13                                                    | Starting current $I_s/I_N$                                                  | <b>8.8</b>                                                   |                                    | Fullfilled IEC 60034-12 design N,H                                                  |
| 14                                                    | Nominal torque $T_N$                                                        | <b>80</b>                                                    | Nm                                 |                                                                                     |
| 15                                                    | Locked rotor torque $T_s/T_N$                                               | <b>2.9</b>                                                   |                                    |                                                                                     |
| 16                                                    | Maximum torque $T_{max}/T_N$                                                | <b>3.5</b>                                                   |                                    |                                                                                     |
| 17                                                    | Minimum torque $T_{min}/T_N$                                                | <b>2.3</b>                                                   |                                    |                                                                                     |
| 18                                                    | Speed at minimum torque                                                     | <b>1728</b>                                                  | r/min                              |                                                                                     |
| Load characteristics (IEC 60034-2-1:2007)             |                                                                             | Load %                                                       | Current A                          | Efficiency %                                                                        |
| 19                                                    | PLL determined from residual loss                                           | <b>100</b>                                                   | <b>44.7</b>                        | <b>93.5 / IE3</b>                                                                   |
| 20                                                    |                                                                             | <b>75</b>                                                    | <b>34.3</b>                        | <b>93.5</b>                                                                         |
| 21                                                    |                                                                             | <b>50</b>                                                    | <b>24.5</b>                        | <b>92.7</b>                                                                         |
| 22                                                    |                                                                             | <b>Start</b>                                                 | <b>394</b>                         | <b>0.36</b>                                                                         |
| 23                                                    | Maximum starting time from hot                                              | <b>15</b>                                                    | s                                  |                                                                                     |
| 24                                                    | Maximum starting time from cold                                             | <b>27</b>                                                    | s                                  |                                                                                     |
| 25                                                    | Insulation class / Temperature class                                        | <b>F / B</b>                                                 |                                    |                                                                                     |
| 26                                                    | Ambient temperature                                                         | <b>40</b>                                                    | °C                                 |                                                                                     |
| 27                                                    | Altitude                                                                    | <b>1000</b>                                                  | m.a.s.l.                           |                                                                                     |
| 28                                                    | Enclosure                                                                   | <b>IP55</b>                                                  |                                    |                                                                                     |
| 29                                                    | Cooling system                                                              | <b>IC411 self ventilated</b>                                 |                                    |                                                                                     |
| 30                                                    | Bearing DE/NDE                                                              | <b>6312/C3 - 6210/C3</b>                                     |                                    |                                                                                     |
| 31                                                    | Type of Grease                                                              |                                                              |                                    |                                                                                     |
| 32                                                    | Sound pressure level (LP dB(A) 1m)                                          | <b>80</b>                                                    | dB(A)                              | at load                                                                             |
| 33                                                    | Moment of inertia $J = \frac{1}{4} GD^2$                                    | <b>0.196</b>                                                 | kg-m2                              |                                                                                     |
| 34                                                    | Balancing                                                                   |                                                              |                                    |                                                                                     |
| 35                                                    | Vibration class                                                             |                                                              |                                    |                                                                                     |
| 36                                                    | Position of terminal box                                                    | <b>Top</b>                                                   |                                    |                                                                                     |
| 37                                                    | Terminal box entries; no, dimens.                                           |                                                              |                                    |                                                                                     |
| 38                                                    | Number of power terminals                                                   |                                                              |                                    |                                                                                     |
| 39                                                    | Direction of rotation                                                       | <b>CW or CCW</b>                                             |                                    |                                                                                     |
| 40                                                    | Weight of rotor                                                             | <b>61</b>                                                    | kg                                 |                                                                                     |
| 41                                                    | Total weight of motor                                                       | <b>289</b>                                                   | kg                                 |                                                                                     |
| 42                                                    | Dimension drawing no.                                                       |                                                              |                                    |                                                                                     |
| 43                                                    |                                                                             |                                                              |                                    |                                                                                     |
| 44                                                    |                                                                             |                                                              |                                    |                                                                                     |
| 45                                                    |                                                                             |                                                              |                                    |                                                                                     |
| Ex-motors                                             |                                                                             |                                                              |                                    |                                                                                     |
| 46                                                    |                                                                             |                                                              |                                    |                                                                                     |
| 47                                                    |                                                                             |                                                              |                                    |                                                                                     |
| 48                                                    |                                                                             |                                                              |                                    |                                                                                     |
| Option Variant Codes / Definition                     |                                                                             |                                                              |                                    |                                                                                     |
| 49                                                    | +011 Fulfilling CSA Energy Efficiency Verification IE3 (code 010 included). |                                                              |                                    |                                                                                     |
| 50                                                    | +332 Baldor Catalogue #                                                     |                                                              |                                    |                                                                                     |
| 51                                                    | +509 Fulfilling EISA Subtype I efficiency requirements, CC031A              |                                                              |                                    |                                                                                     |
| 52                                                    |                                                                             |                                                              |                                    |                                                                                     |
| Remarks:                                              |                                                                             |                                                              |                                    |                                                                                     |
| Data based on situation 9/8/2015                      |                                                                             |                                                              |                                    |                                                                                     |
| All data subject to tolerances in accordance with IEC |                                                                             |                                                              |                                    |                                                                                     |
| Guaranteed values on request                          |                                                                             |                                                              |                                    |                                                                                     |

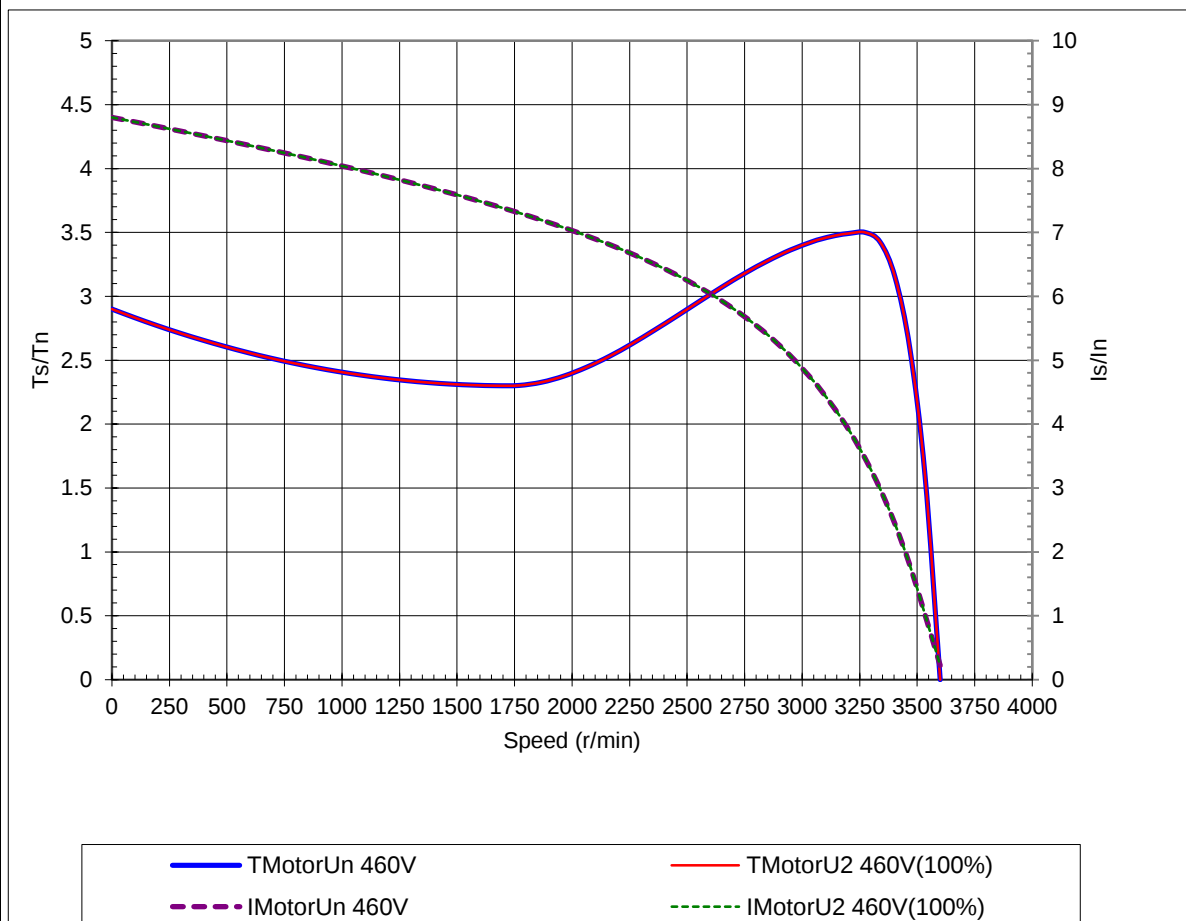


# ABB Motors and Generators Starting Curves



|                    |                                              |                     |                |
|--------------------|----------------------------------------------|---------------------|----------------|
| Project            |                                              | Location            |                |
| Department/Author  | Customer name                                | Customer ref.       | Item name      |
| Our ref.           | Rev/Changed b Date of issue                  | Saving ident        | Pages          |
|                    | A 12/23/2015                                 | untitled.xls        | 3(3)           |
| Type of product    | TEFC, 3-phase, squirrel cage induction motor |                     |                |
| Type/Frame         | M3BP 200MLA 2                                | Calc. ref.          | 3GZF021020-136 |
| Product code       | 3GBP 201 410-ADK                             | Frequency (Hz)      | 60             |
| Rated output $P_N$ | 30 kW                                        | Rated current $I_N$ | 44.7 A         |
| Type of duty       | S1(IEC) 100%                                 |                     |                |

|                                  |      |                   |     |                   |            |
|----------------------------------|------|-------------------|-----|-------------------|------------|
| $J_{motor}$ (kgm <sup>2</sup> )  | 0.2  | Voltage (V) 100%  | 460 | Voltage (V)       | 460V(100%) |
| $J_{load}$ (kgm <sup>2</sup> )   |      | $T_{start}/T_N$   | 2.9 | $T_{start}/T_N$   | 2.9        |
| Speed (r/min)                    | 3563 | Starting time (s) |     | Starting time (s) |            |
| $T_N$ (Nm)                       | 80   | Speed (r/min)     |     | Speed (r/min)     |            |
| $T_{load}$ (Nm)                  |      | $I_s/I_N$         | 8.8 | $I_s/I_N$         | 8.8        |
| Nbr. of Consecutive Starts at UN |      | $T_{max}/T_N$     | 3.5 | $T_{max}/T_N$     | 3.5        |



Load characteristics (IEC 60034-2-1:2007)  
Data based on situation 9/8/2015

All data subject to tolerances in accordance with IEC