

# Three Phase Induction Motor - Squirrel Cage



|                       |               |                             |                         |
|-----------------------|---------------|-----------------------------|-------------------------|
| Customer              |               | : IDS                       |                         |
| Product line          |               | : W22 IE3 Three-Phase       | Product code : 12976955 |
| Frame                 | : 225S/M      | Locked rotor time           | : 25s (cold) 14s (hot)  |
| Output                | : 45 kW       | Temperature rise            | : 80 K                  |
| Poles                 | : 4           | Duty cycle                  | : S1                    |
| Frequency             | : 50 Hz       | Ambient temperature         | : -20°C to +40°C        |
| Rated voltage         | : 400/690 V   | Altitude                    | : 1000 m.a.s.l.         |
| Rated current         | : 80.9/46.9 A | Protection degree           | : IP55                  |
| L. R. Amperes         | : 607/352 A   | Cooling method              | : IC411 - TEFC          |
| LRC                   | : 7.5         | Mounting                    | : B35T                  |
| No load current       | : 31.7/18.4 A | Rotation <sup>1</sup>       | : Both (CW and CCW)     |
| Rated speed           | : 1480 rpm    | Noise level <sup>2</sup>    | : 63.0 dB(A)            |
| Slip                  | : 1.33 %      | Starting method             | : Direct On Line        |
| Rated torque          | : 29.6 kgfm   | Approx. weight <sup>3</sup> | : 414 kg                |
| Locked rotor torque   | : 280 %       |                             |                         |
| Breakdown torque      | : 310 %       |                             |                         |
| Insulation class      | : F           |                             |                         |
| Service factor        | : 1.00        |                             |                         |
| Moment of inertia (J) | : 0.6733 kgm² |                             |                         |
| Design                | : N           |                             |                         |
| Output                | 50%           | 75%                         | 100%                    |
| Efficiency (%)        | 93.7          | 94.1                        | 94.4                    |
| Power Factor          | 0.71          | 0.81                        | 0.85                    |
| Foundation loads      |               |                             |                         |
| Max. traction         |               | : 759 kgf                   |                         |
| Max. compression      |               | : 1173 kgf                  |                         |
|                       |               | <u>Drive end</u>            | <u>Non drive end</u>    |
| Bearing type          | :             | 6314 C3                     | 6314 C3                 |
| Sealing               | :             | Oil Seal                    | Oil Seal                |
| Lubrication interval  | :             | 14000 h                     | 14000 h                 |
| Lubricant amount      | :             | 27 g                        | 27 g                    |
| Lubricant type        | :             | Mobil Polyrex EM            |                         |
| Notes                 |               |                             |                         |
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# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer : IDS

### Thermal protection

| ID | Application | Type                 | Quantity  | Sensing Temperature |
|----|-------------|----------------------|-----------|---------------------|
| 1  | Winding     | Thermistor - 2 wires | 1 x Phase | 155 °C              |

| Rev.         | Changes Summary |  | Performed | Checked | Date     |
|--------------|-----------------|--|-----------|---------|----------|
|              |                 |  |           |         |          |
| Performed by |                 |  |           | Page    | Revision |
| Checked by   |                 |  |           | 2 / 3   |          |
| Date         | 10/07/2019      |  |           |         |          |

# VFD OPERATION CURVE

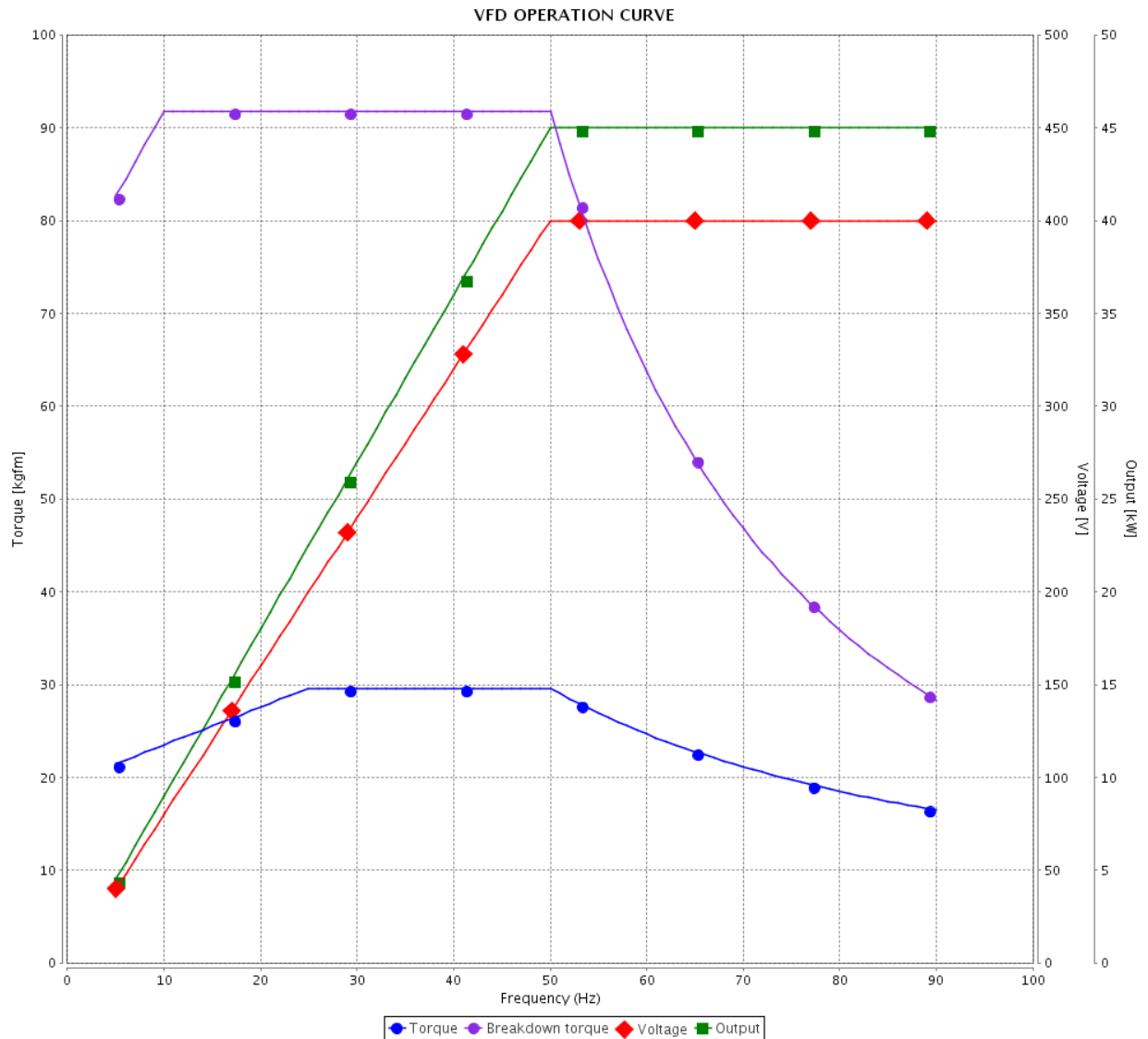
Three Phase Induction Motor - Squirrel Cage



Customer : IDS

Product line : W22 IE3 Three-Phase

Product code : 12976955



Performance : 400/690 V 50 Hz 4P

Rated current : 80.9/46.9 A  
 LRC : 7.5  
 Rated torque : 29.6 kgfm  
 Locked rotor torque : 280 %  
 Breakdown torque : 310 %  
 Rated speed : 1480 rpm

Moment of inertia (J) : 0.6733 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

| Rev.         | Changes Summary | Performed     | Checked | Date |
|--------------|-----------------|---------------|---------|------|
|              |                 |               |         |      |
| Performed by |                 | Page<br>3 / 3 |         |      |
| Checked by   |                 |               |         |      |
| Date         | 10/07/2019      |               |         |      |
|              |                 | Revision      |         |      |