

# Three Phase Induction Motor - Squirrel Cage



|   |      |  |               |                             |
|---|------|--|---------------|-----------------------------|
| Customer : IDS  |      |  |               |                             |
| Product line : W22 IE3 Three-Phase  |      | Product code : 12976955  |               |                             |
| Frame : 225S/M<br>Output : 45 kW<br>Poles : 4<br>Frequency : 50 Hz<br>Rated voltage : 400/690 V<br>Rated current : 80.9/46.9 A<br>L. R. Amperes : 607/352 A<br>LRC : 7.5<br>No load current : 31.7/18.4 A<br>Rated speed : 1480 rpm<br>Slip : 1.33 %<br>Rated torque : 29.6 kgfm<br>Locked rotor torque : 280 %<br>Breakdown torque : 310 %<br>Insulation class : F<br>Service factor : 1.00<br>Moment of inertia (J) : 0.6733 kgm²<br>Design : N |      | Locked rotor time : 25s (cold) 14s (hot)<br>Temperature rise : 80 K<br>Duty cycle : S1<br>Ambient temperature : -20°C to +40°C<br>Altitude : 1000 m.a.s.l.<br>Protection degree : IP55<br>Cooling method : IC411 - TEFC<br>Mounting : B35T<br>Rotation¹ : Both (CW and CCW)<br>Noise level² : 63.0 dB(A)<br>Starting method : Direct On Line<br>Approx. weight³ : 414 kg |               |                             |
| Output  | 50%  | 75%  | 100%          | Foundation loads            |
| Efficiency (%)  | 93.7 | 94.1   | 94.4          | Max. traction : 759 kgf     |
| Power Factor  | 0.71 | 0.81   | 0.85          | Max. compression : 1173 kgf |
|   |      | Drive end  | Non drive end |                             |
| 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   |               |                             |
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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

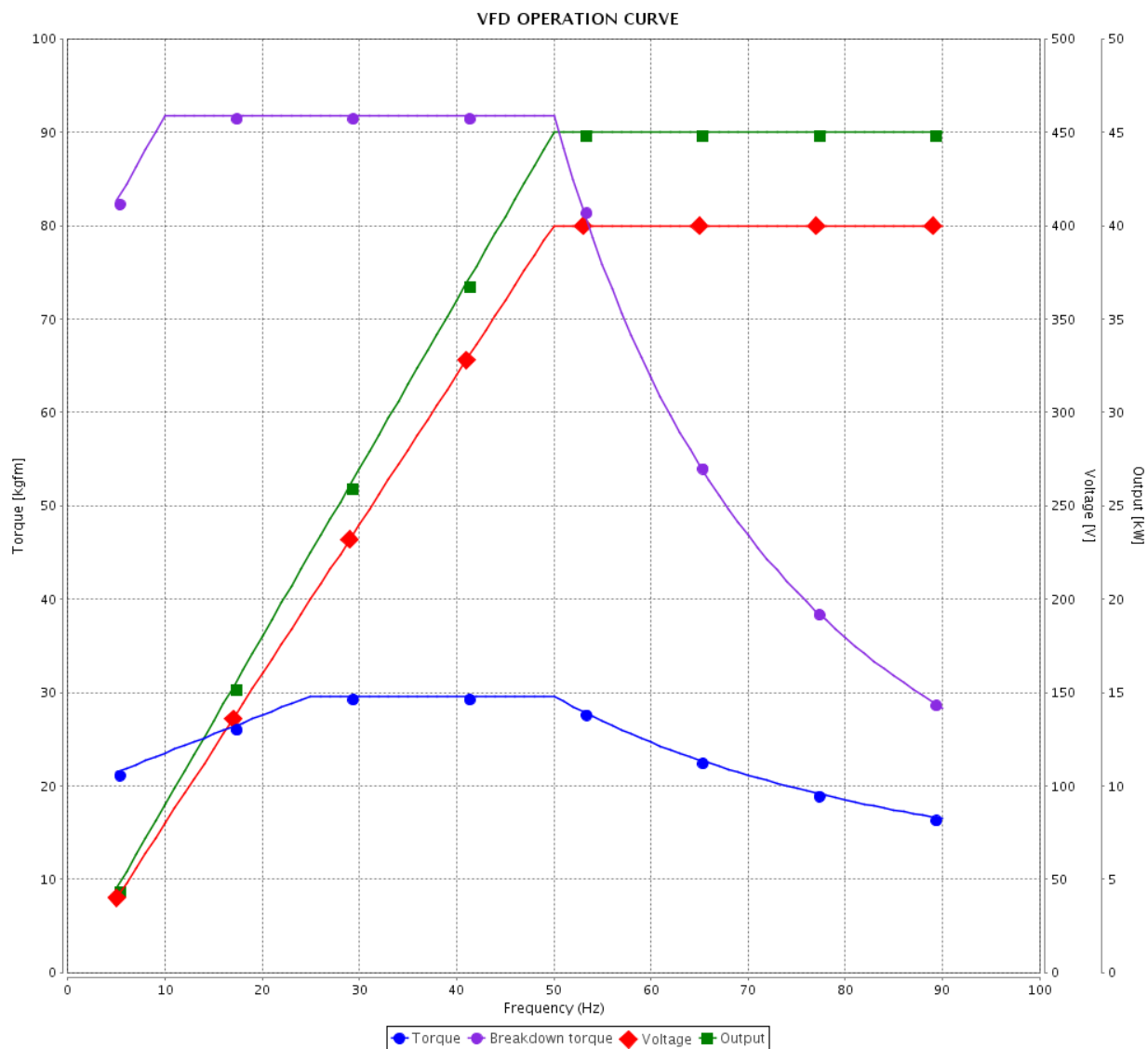
Three Phase Induction Motor - Squirrel Cage



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      |         |      |