



# PRODUCTION PROGRAM

## 1. Three phase squirrel-cage energy efficient induction motors according IE2

- IEC frame size : 80 – 355
- nominal output : 0,75kW – 375kW
- No. of poles : 2, 4 or 6

## 2. Three phase squirrel-cage induction motors with surface cooling or with external fan (inverter drive is possible) according IE1

### 2.1. Low voltage

- IEC frame size : 56 – 500
- nominal output : 0,04kW – 1400kW
- No. of poles : 2, 4, 6, 8, 10 or 12

### 2.2. High voltage (up to 11000V; 50Hz)

- IEC frame size : 315 – 750
- nominal output : 160kW – 5000kW
- No. of poles : 2, 4, 6, 8, 10 or 12

## 3. Single phase motors with a low starting torque

- IEC frame size : 56 – 100
- nominal output : 0,04kW – 2,7kW
- No. of poles : 2 or 4

## 4. Single phase motors with a high starting torque

- IEC frame size : 63 – 80
- nominal output : 0,12kW – 1,5kW
- No. of poles : 2 or 4

## 5. Three phase squirrel-cage induction brake motors

### 5.1. with AC brake

- IEC frame size : 56 – 160
- nominal output : 0,06kW – 15,0kW
- No. of poles : 2, 4, 6, 8 or multiple speed

### 5.2. with DC brake

- IEC frame size : 56 – 280
- nominal output : 0,06kW – 90,0kW
- No. of poles : 2, 4, 6, 8 or multiple speed

## 6. Three phase squirrel-cage induction multiple-speed motors

- IEC frame size : 71 – 315
- nominal output : 0,12/0,28kW – 75/90kW
- No. of poles : 4/2, 6/4, 8/4, 8/6 or 12/6

## 7. Three phase squirrel-cage induction motors with increased rated output

## 8. Three phase slip-ring induction motors

- IEC frame size : 100 – 400
- nominal output : 0,8kW – 315kW
- No. of poles : 4, 6, 8, 10 or 12

## 9. Three phase squirrel-cage explosion-proof induction motors according to the following versions:

- **EExe II T3-T4** with ATEX approval for the frame sizes 63 – 180
- **Exde II T5** with ATEX approval for the frame sizes 80 – 630

### 9.1. low voltage

- IEC frame size : 63 – 355
- nominal output : 0,09kW – 250kW
- No. of poles : 2, 4, 6 or 8

### 9.2. high voltage (6600V, 50Hz)

- IEC frame size : 500 – 630
- nominal output : 160kW – 3000kW
- No. of poles : 2, 4, 6 or 8

## 10. Three phase squirrel-cage induction reluctance motors

- IEC frame size : 71 – 180
- nominal output : on request

## 11. Three phase or single phase cooling medium pumps with different dip lengths for pumping of coolants at machine tools

## 12. Three phase submersible induction motors for a maximum depth of 60m in the medium (IP68)

- nominal output : 4,0kW – 18,5kW
- No. of poles : 2, 4, 6, 8 or 12

## 13. Three phase squirrel-cage induction motors in MARINE design

- IEC frame size : 90 – 400
- nominal output : 0,37kW – 950kW
- No. of poles : 2, 4, 6 or 8

## 14. Three phase squirrel-cage induction motors according to NEMA-PREMIUM standards with CSA approval

- IEC frame size : 143 – 587
- nominal output : 0,8HP – 500HP
- No. of poles : 2, 4, 6 or 8

## 15. Three phase and single phase induction motor components according to the requirements of the customer (providing a substantial number of pieces)

## 16. Special three phase and single phase induction motors designed to the customer's specifications (providing a substantial number of pieces) e.g. motors with special flanges, special shafts, special frequency, special voltage or with a special torque like motors suitable for the use in industrial ovens to circulate hot air at a temperature up to 900°C with an offshore cooling zone

## 17. FFD motors are also available with the following special equipment:

- insulation class „H“ or „C“
- windings thermal protection (PTC or Pt100)
- bearings thermal protection (PTC or Pt100)
- anti-condensation heater
- sockets of vibration detectors
- strengthened bearings
- fine dynamically balanced
- tropicalized
- IP56 or IP65
- double voltage
- double insulation
- external fan
- encoder
- rain hat
- special painting
- high ambient temperature for example 100°C

## 18. Electrical repairs of all manufacturers (except profile wire)

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