



# Type Test Report

Motor tested in accordance with IEC60034-2-1 & AS/NZS1359.102.3.Efficiency as per IEC60034-2-1  
(PLL determined from residual loss)

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Type: TAI 132S-8

TR Number: 2012112102

Test Lab: Techtop factory

Comments: *This test report is also applicable for TCI 132S-8 2.2kW*

### Nameplate:

|            |               |     |            |        |       |         |
|------------|---------------|-----|------------|--------|-------|---------|
| Type:      | TAI 132S-8    |     | Duty:      | S1     | IP:   | 55      |
| Serial No: | 2012080150130 |     | Ins.Cl:    | F      | KG:   |         |
| Voltage    | Hz            | kW  | A          | cos fi | r/min | Eff.[%] |
| 230/400    | 50            | 2.2 | 10.36/5.95 | 0.67   | 710   | 79.6    |
| Brg.DE:    | 6308ZZ        |     | Brg.NDE:   | 6308ZZ |       |         |

### No Load Test:

|                | Voltage<br>[V] | Current<br>[A] | Input<br>[W] | Freq.<br>[Hz] | Speed<br>[min <sup>-1</sup> ] | Torque<br>[Nm] | Output<br>[W] | Power<br>Factor | Eff.<br>[%] |
|----------------|----------------|----------------|--------------|---------------|-------------------------------|----------------|---------------|-----------------|-------------|
| No load        | 380            | 3.72           | 195          | 50            | 750                           | 0.0            | 0             | 0.08            | 0.0         |
| <b>No load</b> | <b>400</b>     | <b>4.03</b>    | <b>222</b>   | <b>50</b>     | <b>750</b>                    | <b>0.0</b>     | <b>0</b>      | <b>0.08</b>     | <b>0.0</b>  |
| No load        | 420            | 4.4            | 255          | 50            | 750                           | 0.0            | 0             | 0.08            | 0.0         |

### Load Test:

| Load<br>[p.u] | Voltage<br>[V] | Current<br>[A] | Input<br>[W] | Freq.<br>[Hz] | Speed<br>[min <sup>-1</sup> ] | Torque<br>[Nm] | Output<br>[W] | Power<br>Factor | Eff.<br>[%] |
|---------------|----------------|----------------|--------------|---------------|-------------------------------|----------------|---------------|-----------------|-------------|
| 0.25          | 400            | 4.09           | 803          | 50            | 742                           | 7.1            | 550           | 0.28            | 68.5        |
| 0.5           | 400            | 4.46           | 1404         | 50            | 735                           | 14.3           | 1100          | 0.45            | 78.3        |
| 0.75          | 400            | 5.05           | 2048         | 50            | 726                           | 21.7           | 1650          | 0.58            | 80.6        |
| <b>1</b>      | <b>400</b>     | <b>5.90</b>    | <b>2752</b>  | <b>50</b>     | <b>715</b>                    | <b>29.4</b>    | <b>2200</b>   | <b>0.67</b>     | <b>80.0</b> |
| 1.25          | 400            | 7.02           | 3540         | 50            | 702                           | 37.4           | 2750          | 0.73            | 77.7        |
| 1.5           | 400            | 8.46           | 4445         | 50            | 686                           | 45.9           | 3300          | 0.76            | 74.2        |

### Full Load At 380V & 420V

|      | Voltage<br>[V] | Current<br>[A] | Input<br>[W] | Freq.<br>[Hz] | Speed<br>[min <sup>-1</sup> ] | Torque<br>[Nm] | Output<br>[W] | Power<br>Factor | Eff.<br>[%] |
|------|----------------|----------------|--------------|---------------|-------------------------------|----------------|---------------|-----------------|-------------|
| 380V | 380            | 5.94           | 2781         | 50            | 709                           | 29.6           | 2200          | 0.71            | 79.1        |
| 420V | 420            | 5.91           | 2744         | 50            | 719                           | 29.2           | 2200          | 0.64            | 80.2        |

### Locked Rotor Test:

|         |        |       |         |      |
|---------|--------|-------|---------|------|
| Un (V)  | Ik (A) | Pk(W) | Tk (Nm) | cosφ |
| 400/230 | 24.74  | 10212 | 54.96   | 0.60 |

### Temperature Rise:

|                  |       |      |                           |      |      |
|------------------|-------|------|---------------------------|------|------|
| Amb.Temperature: | 17    | [°C] | Winding temperature rise: | 60.5 | [K]  |
| Cold Resistance: | 5.072 | [Ω]  | Frame:                    | 44.3 | [°C] |
| Hot Resistance:  | 6.268 | [Ω]  | Bearing:                  | 47.8 | [°C] |

### Torque And Current:

|                                    |                                     |
|------------------------------------|-------------------------------------|
| Locked Rotor Tor./Rated Tor.: 1.86 | Breakdown Torque/Rated Torque: 2.33 |
| Locked Rotor Cur./Rated Cur.: 4.20 | Pullup Torque/Rated Torque: 1.74    |

|                  |                           |                      |
|------------------|---------------------------|----------------------|
| Check: Zhang Kai | Operator: Chen Zhongliang | Test Date: 21-Nov-12 |
|------------------|---------------------------|----------------------|