

# Reversible (Y-Δ) Asynchronous motor

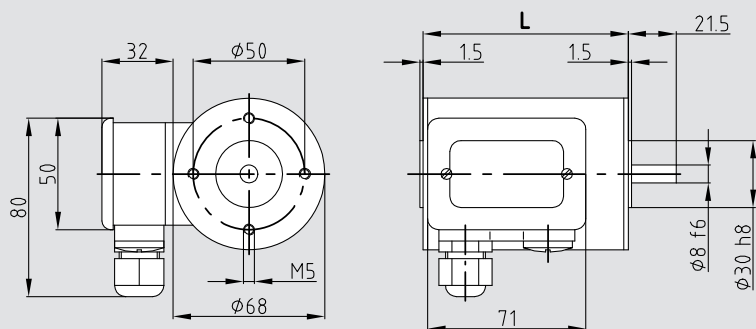
|                    |                       |   |
|--------------------|-----------------------|---|
| <b>Properties:</b> | Connection:           | 230 V / 50 Hz (running capacitor required)<br>or 400 V / 50 Hz three-phase system<br>Connection using K4 terminal boxes |
|                    | Service life:         | 20,000 hours, S1 duty   |
|                    | Insulation mat.class: | B, optional F   |
|                    | System of protection: | IP 44, optional up to IP 65   |
|                    | Special model:        | Design for short-time duty with high performance  |
|                    | Options:              | Thermal protection, special shafts, special flanges,<br>custom designed   |



| Type                   | Name                         |                    |                  | <b>KD 642</b> | <b>KD 642</b> | <b>KD 662</b> | <b>KD 662</b> |
|------------------------|------------------------------|--------------------|------------------|---------------|---------------|---------------|---------------|
|                        | Nominal voltages             | U                  | AC voltage       | 230           | 400           | 230           | 400           |
| <b>Specification</b>   | Nominal power                | P <sub>2</sub>     | W                | 19            | 24            | 34            | 42            |
|                        | Nominal speed                | n <sub>nom</sub>   | rpm              | 2650          | 2650          | 2650          | 2650          |
|                        | Nominal torque               | T <sub>nom</sub>   | Ncm              | 7.0           | 8.7           | 12.5          | 15.4          |
|                        | Starting torque              | T <sub>A</sub>     | Ncm              | 4.0           | 12            | 3.5           | 27.0          |
|                        | Nominal current              | I <sub>nom</sub>   | mA               | 152           | 70            | 290           | 110           |
|                        | No-load current              | I <sub>0</sub>     | mA               | 82            | 60            | 145           | 64            |
| <b>Characteristics</b> | Locked rotor speed           | n <sub>break</sub> | rpm              | 2400          | -             | 2300          | -             |
|                        | Locked rotor torque          | T <sub>break</sub> | Ncm              | 11            | -             | 19            | -             |
|                        | Nominal efficiency           | η                  |                  | 0.52          | 0.59          | 0.51          | 0.61          |
| <b>Connection</b>      | Terminal resistance          | R                  | Ohm              | 240           | 697           | 195           | 557           |
|                        | Input power                  | P <sub>1</sub>     | W                | 39.5          | 42.5          | 66.5          | 55.0          |
|                        | Running capacitor            | C                  | μF               | 2.5           | -             | 3.0           | -             |
| <b>Dynamics</b>        | Weight                       | m                  | kg               | 1.2           | 1.2           | 1.7           | 1.7           |
|                        | Moment of inertia            | J                  | gcm <sup>2</sup> | 390           | 390           | 595           | 595           |
| <b>Thermal</b>         | Adm. ambient temperature     | T <sub>a</sub>     | °C               | -20 to +40    | -20 to +40    | -20 to +40    | -20 to +40    |
|                        | Max. adm. stator temperature | T <sub>max</sub>   | °C               | +120          | +120          | +120          | +120          |
| <b>Coupling</b>        | Shaft diameter               | d                  | mm               | 8             | 8             | 8             | 8             |
|                        | Max. axial force             | F <sub>a</sub>     | N                | 20            | 20            | 20            | 20            |
|                        | Max. radial force            | F <sub>r</sub>     | N                | 220           | 220           | 220           | 220           |

## Dimensions

| Type   | L / mm |
|--------|--------|
| KD 642 | 92     |
| KD 662 | 112    |



## System technology

|  |                |       |         |
|--|----------------|-------|---------|
| <b>Recommended combinations</b><br>other gears and extensions upon request | Worm gear      | S 567 | S 668   |
|  | Spur gear      | Z 8   | Z 6 M 7 |
|  | Planetary gear | PM 50 |         |
|  | Rotary encoder | RV 30 | RI 30   |
|  | Brake          | B 3   |         |

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**Properties:**

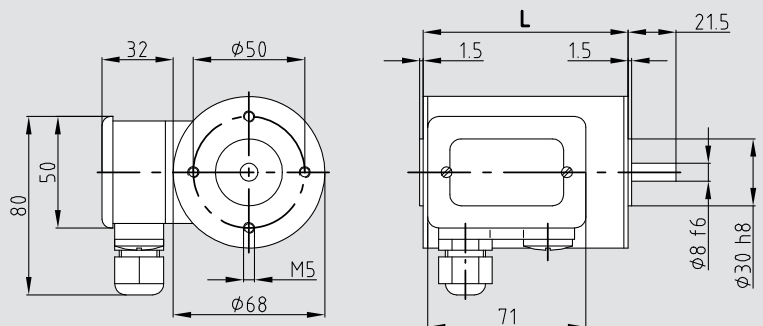
|                        |  |
|------------------------|--|
| Connection:            | 230 V / 50 Hz (running capacitor required) or 400 V / 50 Hz three-phase system<br>Connection using K4 terminal boxes |
| Service life:          | 20,000 hours, S1 duty  |
| Insulation mat. class: | B, optional F  |
| System of protection:  | IP 44, optional up to IP 65  |
| Special model:         | Design for short-time duty with high performance   |
| Options:               | Thermal protection, special shafts, special flanges, custom designed   |



| Type                   | Name                         |                    |                  | <b>KD 644</b> | <b>KD 644</b> | <b>KD 664</b> | <b>KD 664</b> |
|------------------------|------------------------------|--------------------|------------------|---------------|---------------|---------------|---------------|
|                        | Nominal voltages             | U                  | AC voltage       | 230           | 400           | 230           | 400           |
| <b>Specification</b>   | Nominal power                | P <sub>2</sub>     | W                | 11            | 13            | 12            | 15            |
|                        | Nominal speed                | n <sub>nom</sub>   | rpm              | 1250          | 1250          | 1250          | 1250          |
|                        | Nominal torque               | T <sub>nom</sub>   | Ncm              | 9.1           | 10.1          | 9.5           | 11.7          |
|                        | Starting torque              | T <sub>A</sub>     | Ncm              | 7             | 18            | 8             | 24            |
|                        | Nominal current              | I <sub>nom</sub>   | mA               | 153           | 75            | 185           | 82            |
|                        | No-load current              | I <sub>0</sub>     | mA               | 123           | 71            | 140           | 80            |
| <b>Characteristics</b> | Locked rotor speed           | n <sub>break</sub> | rpm              | 950           | -             | 950           | -             |
|                        | Locked rotor torque          | T <sub>break</sub> | Ncm              | 12            | -             | 13            | -             |
|                        | Nominal efficiency           | η                  |                  | 0.28          | 0.33          | 0.34          | 0.39          |
| <b>Connection</b>      | Terminal resistance          | R                  | Ohm              | 438           | 1333          | 364           | 1091          |
|                        | Input power                  | P <sub>1</sub>     | W                | 34            | 35            | 32            | 32.5          |
|                        | Running capacitor            | C                  | μF               | 2.5           | -             | 3.0           | -             |
| <b>Dynamics</b>        | Weight                       | m                  | kg               | 1.2           | 1.2           | 1.7           | 1.7           |
|                        | Moment of inertia            | J                  | gcm <sup>2</sup> | 390           | 390           | 595           | 595           |
| <b>Thermal</b>         | Adm. ambient temperature     | T <sub>a</sub>     | °C               | -20 to +40    | -20 to +40    | -20 to +40    | -20 to +40    |
|                        | Max. adm. stator temperature | T <sub>max</sub>   | °C               | +120          | +120          | +120          | +120          |
| <b>Coupling</b>        | Shaft diameter               | d                  | mm               | 8             | 8             | 8             | 8             |
|                        | Max. axial force             | F <sub>a</sub>     | N                | 20            | 20            | 20            | 20            |
|                        | Max. radial force            | F <sub>r</sub>     | N                | 220           | 220           | 220           | 220           |

**Dimensions**

| Type   | L / mm |
|--------|--------|
| KD 644 | 92     |
| KD 664 | 112    |



**System technology**

| Recommended combinations<br>other gears and extensions<br>upon request | Worm gear      |           | S 567 | S 668 |
|--|----------------|-----------|-------|-------|
|  |                | Spur gear | Z 8   | Z 6   |
|  | Planetary gear | PM 50     |       |       |
|  | Rotary encoder | RV 30     | RI 30 |       |
|  | Brake          | B 3       |       |       |