



America

# CERTIFICATE

No. U10 116576 0001 Rev. 01

**Holder of Certificate:** **Wittur Electric Drives GmbH**

Offenburger Straße 3  
01189 Dresden  
GERMANY

**Certification Mark:**



**Product:**

**Electric Motors  
(Gearless synchronous lift machine)**

**Tested  
according to:**

UL 1004-1:2012/R:2020-11  
UL 1004-8:2013/R:2018-12  
CSA C22.2 No. 100:2014/U1:2017-04  
CSA B44.1:19/ASME A17.5-2019

This product was voluntarily tested to the relevant safety requirements referenced on this certificate. It can be marked with the certification mark above. The mark must not be altered in any way. The certificate holder shall not transfer this certificate to third parties. This product certification system operated by TÜV SÜD America Inc. most closely resembles system 3 as defined in ISO/IEC 17067. Certification is based on the TÜV SÜD "Testing, Certification, Validation and Verification Regulations (TCVVR)". For Canadian standards TÜV SÜD America Inc. is accredited by the Standards Council of Canada to ISO/IEC 17065.

**Test report no.:** 713330016

**Date,** 2024-07-23

( Benedikt Pulver )



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**Model(s):**                    **WSU-LF series**  
**WSU-TB series**  
**WSU-TR series**  
**WSU-TS series**  
**WSU-08 series**  
**WSU-21 series**  
**WSU-25 series**  
**WSU-29 series**

**Brand Name(s):**            **WITTUR**

## Parameters:

### WSU-LF Series

|                       |                     |
|-----------------------|---------------------|
| Duty                  | S3-40%              |
| Torque (Nm)           | 900/1200/1650/1850  |
| Maximum Torque (Nm)   | 1800/2400/3300/3700 |
| Max. Speed (RPM)      | 298                 |
| Max. link voltage (V) | 620                 |
| Max. Current (A)      | 123                 |
| Max. Power (kW)       | 46,2                |

### WSU-TB Series

#### WSU-TR Series

|                       |                             |
|-----------------------|-----------------------------|
| Duty                  | S3-40%                      |
| Torque (Nm)           | 80/105/140/170/180/240/290  |
| Maximum Torque (Nm)   | 160/220/275/330/325/430/520 |
| Max. Speed (RPM)      | 611                         |
| Max. link voltage (V) | 620                         |
| Max. Current (A)      | 38                          |
| Max. Power (kW)       | 17                          |

### WSU-TS Series

|                       |             |
|-----------------------|-------------|
| Duty                  | S3-40%      |
| Torque (Nm)           | 180/240/290 |
| Maximum Torque (Nm)   | 325/430/520 |
| Max. Speed (RPM)      | 239         |
| Max. link voltage (V) | 620         |
| Max. Current (A)      | 19,4        |
| Max. Power (kW)       | 7,2         |

### Ratings:

#### WSU-08 Series

|                     |        |
|---------------------|--------|
| Duty                | S3-40% |
| Max Voltage (V)     | 80     |
| Max. Frequency (Hz) | 48     |
| Max. Current (A)    | 62,5   |
| Max. Power (kW)     | 27,6   |

#### WSU-29 Series

|                     |      |
|---------------------|------|
| Duty                | S1   |
| Max Voltage (V)     | 480  |
| Max. Frequency (Hz) | 53,9 |
| Max. Current (A)    | 1345 |
| Max. Power (kW)     | 123  |



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| <b>Ratings:</b>     | <b>WSU-21 Series</b> |                     | <b>WSU-25 Series</b> |
|---------------------|----------------------|---------------------|----------------------|
| Duty                | S3-40%               | Duty                | S1                   |
| Torque (Nm)         | 1300/1950/2600       | Torque (Nm)         | 1750/2200            |
| Maximum Torque (Nm) | 2600/3900/5200       | Maximum Torque (Nm) | 4850/6100            |
| Max. Speed (RPM)    | 294                  | Max. Speed (RPM)    | 294                  |
| Max Voltage (V)     | 480                  | Max Voltage (V)     | 480                  |
| Max. Frequency (Hz) | 53,9                 | Max. Frequency (Hz) | 53,9                 |
| Max. Current (A)    | 197                  | Max. Current (A)    | 145                  |
| Max. Power (kW)     | 80,0                 | Max. Power (kW)     | 67,7                 |



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## Model description

### WSU-LF Series

|            |   |   |   |   |       |   |    |   |    |   |     |   |      |   |      |
|------------|---|---|---|---|-------|---|----|---|----|---|-----|---|------|---|------|
| Example    | W | S | G | - | LF    | . | 2  | - | 0  | E | 095 | / | 40A2 | - | DF   |
| Identifier | W | S | G | - | Z1 Z2 | . | Z3 | - | X1 | X | X3  | / | X4   | - | X5X6 |
|            |   |   |   |   |       |   |    |   |    | 2 |     |   |      |   |      |

W Customer specific identifier

S Synchronous Motor

G G: Gearless  
U: USA/Canada Certification

Z1 Z2 Frame Size

Z3 Overall lengths are available identified by:  
1, 2, 3, S

X1 Customer specific identifier

Motor voltage:

0 400 V DC link: 500...620V (at maximum torque 100% speed)

1 480 V

2 360 V

3 320 V

4 330 V

5 340 V DC link: 400...500V

6 220 / 230 V DC link: 260 ... 350 V

7 380 V

8 460 V DC link: 570...700 V

D 513 V Otis regenerative converter, TWIN version (two windings)

E 400 V Eco version (at maximum torque 90% speed)

F 513 V Otis regenerative inverter with field weakening

X2 H 460 V Schindler, Fan 400V, 2x PT-100 (2-Ltr.)

with adapter plate 829 708

N 400 V TWIN variant (two windings), DC link: 500...620 V

R 513 V Otis regenerative inverter

S 400 V Otis OVF inverter

T 460 V Schindler, fan 400V, 2x PT-100 (2-Ltr.) (See X2=H)

+ Winding version Tandem (xSG-29)

- Winding 2 circuits (TWIN winding)

- Terminal box (star points internal)

X3 Rated Speed  $n_N$

X4 Traction sheave design

X5 X6 Variant code (brake, measuring system, modifications):  
DE, DF, DG, DQ



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**WSU-TB** series

**WSU-TR** series

**WSU-TS** series

|            |    |   |   |       |   |    |   |    |    |     |   |      |   |          |
|------------|----|---|---|-------|---|----|---|----|----|-----|---|------|---|----------|
| Example    | WS | G | - | TS    | . | K  | - | 0  | E  | 212 | / | 18A1 | - | DQ       |
| Identifier | WS | G | - | Z1 Z2 | . | Z3 | - | X1 | X2 | X3  | / | X4   | - | X5<br>X6 |

WS Synchronous Motor

G: Gearless  
U: USA/Canada Certification

Z1 Z2 Frame Size

Z3 Overall lengths are available identified by:  
A B C D (only WSU-TB, WSU-TR series)  
K L M

X1 Customer specific identifier

X2 Motor voltage  
E – U<sub>N</sub> = 400 V / U<sub>ZK</sub> = 500 ... 600 VDC

X3 Rated Speed n<sub>N</sub>

X4 Traction sheave design

X5 X6 Variant code (brake, measuring system, modifications):  
DE, DF, DG, DQ

**WSU-08** series

**WSU-21** series

**WSU-25** series

**WSU-29** series

|            |   |   |   |   |    |   |        |   |    |    |       |   |          |   |       |
|------------|---|---|---|---|----|---|--------|---|----|----|-------|---|----------|---|-------|
| Example    | W | L | G | - | 28 | . | 3      | - | 0  | 0  | 12    | / | 53A      | - | BE    |
| Identifier | W | L | G | - | Z2 | . | Z<br>3 | - | X1 | X2 | X3 X4 | / | X5 X6 X7 | - | X8 X9 |

W Customer specific identifier

S: Synchronous motor

G: Gearless

U: Gearless for Canadian or US market

Z2 Frame sizes Identified by: 08, 21, 25 or 29

Z3 Overall length available. Identified by 1, 2, 3 or 4

X1 Customer specific identifier

X2 Motor voltage:  
e.g. 0: 400V or 2: 360V

X3 X4 Rated speed – the first two numerals

e. g. 11 118 rpm or 14 147 rpm

X5 X6 X7 Traction sheave design

X8 X9 Variant code (brake, measuring system, modifications)

CERTIFICATE ◆ CERTIFICADO ◆ CERTИФИКАТ ◆ 認證證書 ◆ ZERTIFIKAT



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## Conditions of Acceptability

- When installing requirements of Test Standards and Installation Guide must be fulfilled.
- The machines are certified as component parts for which the acceptability for use in the final installation has to be determined by local authorities having jurisdiction.
- The machine are intended for usage in machine rooms with only access to skilled persons.
- The control unit for the elevator and thus for the drive motor units is not included in this examination.
- The suitability of motor-mounting means, motor leads, strain relief, and lead terminations shall be investigated for each end-use application.
- These motors have not been investigated with a speed control. If provided, the suitability and need for any additional testing of a speed control shall be determined in the end-use application.
- The investigation covers only the general construction features (excluding testing of degree of protection) and no evaluation of the performance characteristics has been made. Therefore, the acceptability when operated under normal or abnormal load conditions within an appliance or enclosure must be determined for each use.
- Bonding/ Earthing wire conductor size shall be based on the rating of the branchcircuit overcurrent protective device.
- Bonding/ Earthing shall be determined according end-use requirements.