

# DIN EN 14439:2026-04 (E)

## Cranes - Tower cranes (includes Corrigendum :2026)

---

<b>Contents</b>		<b>Page</b>
European foreword .....		5
Introduction .....		6
<b>1</b>	<b>Scope .....</b>	<b>7</b>
<b>2</b>	<b>Normative references .....</b>	<b>7</b>
<b>3</b>	<b>Terms and definitions .....</b>	<b>10</b>
<b>4</b>	<b>Safety requirements and/or protective measures .....</b>	<b>13</b>
4.1	General .....	13
4.2	Design requirements on the load bearing structure .....	13
4.2.1	General .....	13
4.2.2	Crane parts classification .....	13
4.2.3	Loads .....	14
4.2.4	Load combinations .....	23
4.2.5	Limit states and proof of competence of structural members and connections .....	34
4.2.6	Loads on crane support structure .....	35
4.3	Design requirements on mechanical equipment .....	36
4.3.1	General .....	36
4.3.2	Mechanisms .....	36
4.3.3	Ropes .....	36
4.3.4	Rail wheels .....	37
4.3.5	Slewing ring bearing .....	37
4.3.6	Hooks .....	37
4.4	Design requirements on hydraulic system .....	37
4.4.1	General .....	37
4.4.2	Hydraulic cylinders .....	37
4.5	Design requirements on electrical equipment and control system .....	37
4.5.1	General .....	37
4.5.2	Controls, control stations and cabins .....	37
4.5.3	Limiters and indicators .....	38
4.5.4	Lighting .....	46
4.6	Design requirements on access and guarding .....	46
4.6.1	Guarding .....	46
4.6.2	Access .....	47
4.7	Other design requirements .....	58
4.7.1	Trolley stop device .....	58
4.7.2	Prevention of crane components from falling .....	58
4.7.3	Slewing device during erection and dismantling .....	59
4.7.4	Correct setting of slew brake in the out of service mode .....	59
4.7.5	Noise reduction at source at the design stage .....	59
4.7.6	Backup brake on the luffing mechanism .....	59
4.7.7	Fire protection .....	59
<b>5</b>	<b>Verification of the safety requirements and/or protective measures .....</b>	<b>59</b>
5.1	General .....	59
5.2	Method of verification .....	59
5.3	Fitness for purpose .....	61
5.4	Noise measurement .....	62
5.4.1	Sound power level .....	62

5.4.2	Sound pressure level at control station .....	62
6	Information for use .....	62
6.1	General .....	62
6.2	Instruction manual .....	62
6.2.1	General .....	62
6.2.2	Specification - General .....	62
6.2.3	Instructions for erection and dismantling .....	62
6.2.4	Information on noise emission .....	63
6.2.5	Instructions for the users .....	64
6.2.6	Instructions for maintenance .....	66
6.2.7	Instructions for transportation and storage .....	67
6.2.8	Instructions for the installation of an anti-collision device or a working space limiter .....	67
6.3	Marking .....	67
6.3.1	Identification .....	67
6.3.2	Warnings and information .....	68
Annex A (informative) List of significant hazards .....		69
Annex B (normative) Additional and specific requirements for mobile self-erecting tower cranes ....		74
B.1	General .....	74
B.2	Additional and specific requirements and/or protective measures for mobile self-erecting tower cranes .....	75
B.2.1	Classification .....	75
B.2.2	Design requirements on the load bearing structure .....	75
B.2.3	Design requirements on mechanical equipment .....	75
B.2.4	Design requirements on electrical equipment and control system .....	76
B.2.5	Design requirements on means of access .....	77
B.2.6	Other design requirements .....	77
B.3	Verification of the safety requirements and/or protective measures .....	78
B.4	Information for use .....	78
Annex C (normative) Verification of the safety requirements and/or protective measures .....		79
C.1	General .....	79
C.2	Function test without load .....	79
C.3	Load tests .....	79
C.3.1	General .....	79
C.3.2	Static test .....	79
C.3.3	Dynamic test .....	80
C.4	Verification of the rigid body stability .....	80
Annex D (normative) Noise test code .....		81
D.1	General .....	81
D.2	A-weighted sound power level .....	81
D.2.1	Mounting of the equipment .....	81
D.2.2	Test method .....	82
D.3	A-weighted emission sound pressure level at the control station .....	85
D.3.1	General .....	85
D.3.2	Calculation of emission sound pressure level .....	85
D.4	Values on noise emission .....	86
Annex E (normative) Additional and specific requirements for climbing systems .....		87
E.1	General .....	87
E.2	Safety requirements and/or protective measures .....	87
E.2.1	General .....	87
E.2.2	Design requirements on the load bearing structure .....	87
E.2.3	Additional design requirements on hydraulic system .....	89
E.2.4	Additional design requirements on electrical equipment and control system .....	89

<b>E.2.5</b>	<b>Additional design requirements on access and guarding .....</b>	<b>90</b>
<b>E.3</b>	<b>Verification of the safety requirements and/or protective measures .....</b>	<b>91</b>
<b>E.3.1</b>	<b>Method of verification .....</b>	<b>91</b>
<b>E.3.2</b>	<b>Fitness for purpose .....</b>	<b>92</b>
<b>E.4</b>	<b>Information for use .....</b>	<b>92</b>
<b>E.4.1</b>	<b>Instruction manual .....</b>	<b>92</b>
<b>E.4.2</b>	<b>Marking .....</b>	<b>93</b>
<b>Annex F (informative) Marking - Examples of layout .....</b>		<b>95</b>
<b>Annex G (informative) Selection of a suitable set of crane standards for a given application .....</b>		<b>97</b>
<b>Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC aimed to be covered .....</b>		<b>99</b>
<b>Bibliography .....</b>		<b>103</b>