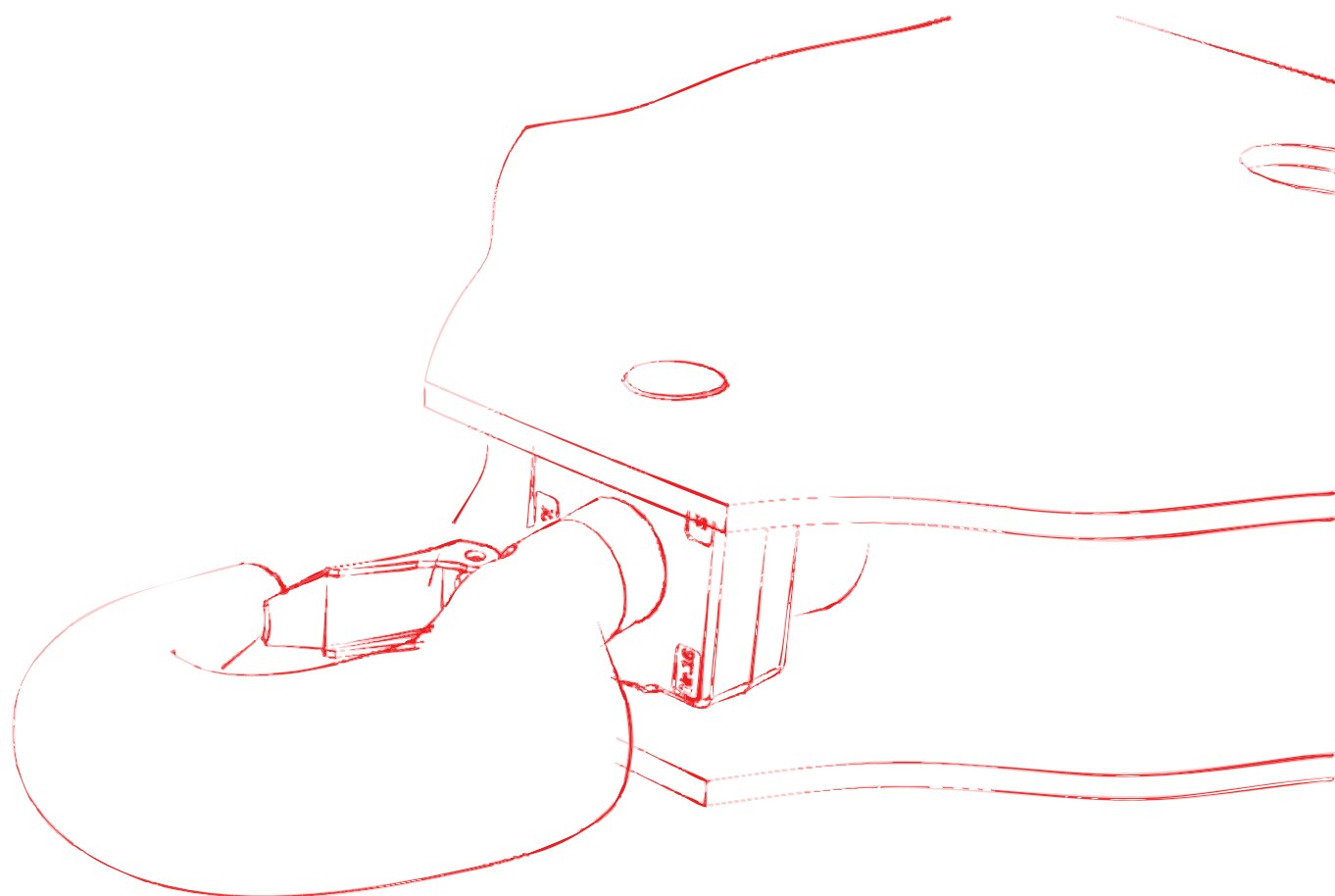


System Component

WOLFF Tower Elements

Technical Information



English

English



Published by

WOLFFKRAN GmbH

Austraße 72

74076 Heilbronn

Germany

Phone +49 7131 9815 0

Fax +49 7131 9815 355

www.wolffkran.com

info@wolffkran.de

Copyright

This documentation including all of its subsections is protected by copyright laws.

Any type of use or modification outside of the stringent limits of the copyright laws without permission of WOLFFKRAN GmbH is prohibited and subject to penalties.

This applies particularly for copying, translation, microfilming and storage and processing in electronic systems.

At the time of printing, the information, data, illustrations and notes comprised in this manual were up-to-date.

Subject to change of design, error and typos.


Stand: 2017

Table of contents


| | | |
|------|---|----|
| 1 | Tower elements and joining frames | 5 |
| 1.1 | Applications with long tower elements | 5 |
| 1.2 | Tower system 1.2 m (TFS 12) | 7 |
| 1.3 | Tower system 1.2 m (TFS 12 LC) | 8 |
| 1.4 | Transition tower system 1.2 m - 1.5 m (TFSÜ 12) | 9 |
| 1.5 | Tower system 1.5 m (TSL 15.4, TFSA 15.4, TFS 15.4) | 10 |
| 1.6 | Tower system 1.5 m (TFS 15.4 L, UV 15.4 L) | 11 |
| 1.7 | Tower system 1.5 m (UVA 15.4, UV 15.4) | 12 |
| 1.8 | Transition tower system 1.5 m - 2.0 m (TÜ 15.4, UVÜ 15.4) | 13 |
| 1.9 | Tower system 2.0 m (1/2 UV 20.4) | 14 |
| 1.10 | Tower system 2.0 m (TFS 20.4, UVA 20.4, UV 20.4) | 15 |
| 1.11 | Tower system 2.0 m (UV 20.4 LC) | 16 |
| 1.12 | Tower system 2.0m (TV 20.4 K) | 17 |
| 1.13 | Tower system 2.0 m (TVA 20.4, TV 20.4) | 18 |
| 1.14 | Tower system 2.0 m (TFS 20.4 L, UV 20.4 L, TV 20.4 L) | 19 |
| 1.15 | Transition tower system 2.0 m - 2.5 m (TVÜ 20.4) | 20 |
| 1.16 | Transition tower system 2.0 m - 2.3 m suitable for TV 20 and TV 23 tower elements (joining frame VR 2023) | 21 |
| 1.17 | Transition tower system 2.0 m - 2.3 m suitable for TV 20 and HT 23 tower elements (TVÜ 20-23) | 22 |
| 1.18 | Tower system 2.3 m (TV 23, HT 23, HTA 23) | 23 |
| 1.19 | Tower system 2.3 m (BT 23) | 24 |
| 1.20 | Transition tower system 2.3 m / 2.5 m – 2.9 m suitable for UV 29 tower elements (joining frame VR 23/25-29) | 25 |
| 1.21 | Transition tower system 2.3 m / 2.5 m – 2.9 m suitable for TV 29 tower elements (joining frame VR 23/25-29.1) | 26 |
| 1.22 | Tower system 2.9 m (UV 29) | 27 |
| 1.23 | Tower system 2.9m (TV 29) | 28 |
| 1.24 | Tower system 2.9 m (BT 29) | 29 |
| 1.25 | Transition tower system 2.9 m - 3.3 m (Joining frame VR 2933) | 30 |
| 1.26 | Tower system 3.3m (TV 33) | 31 |

1 Tower elements and joining frames

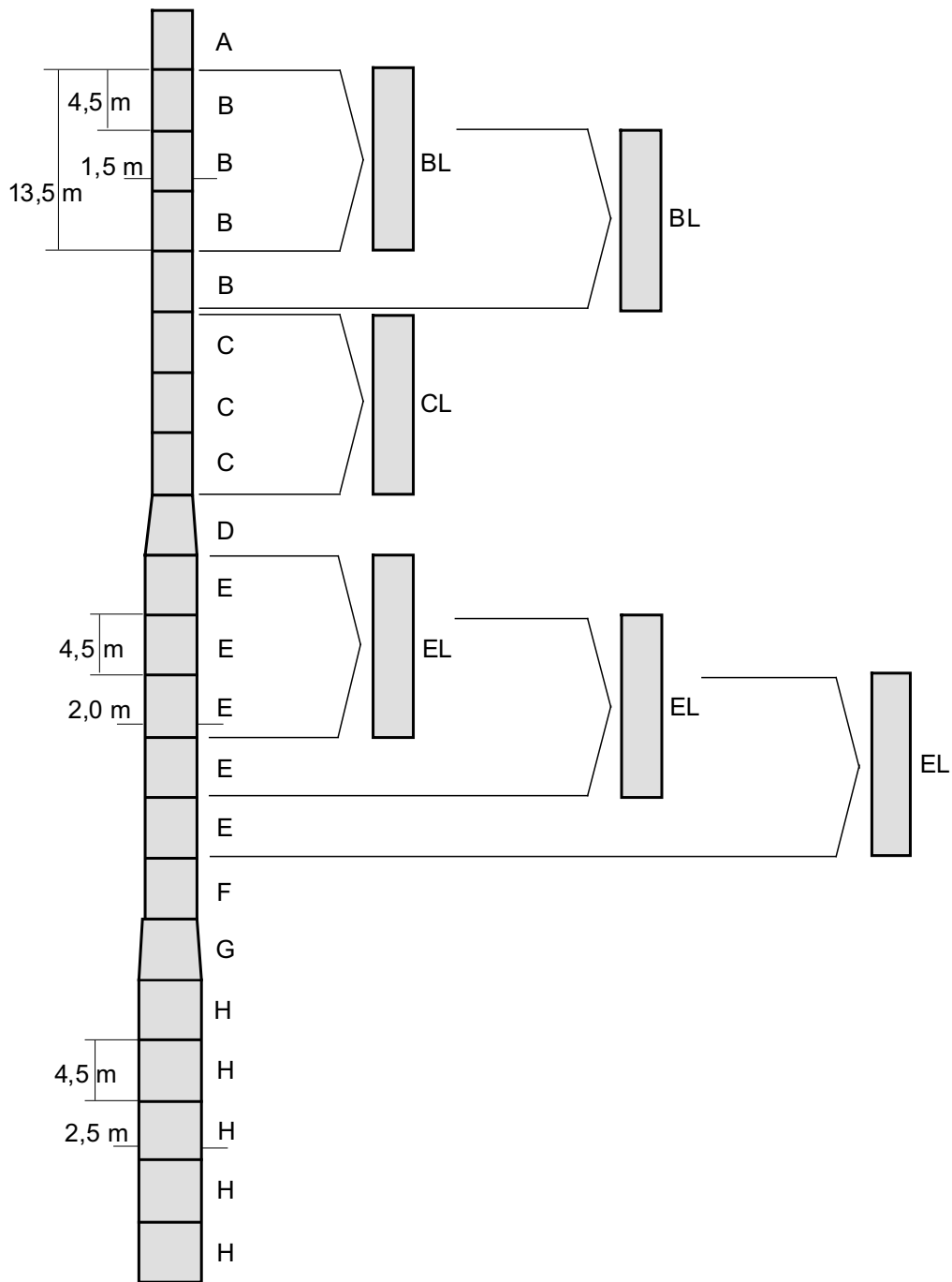
1.1 Applications with long tower elements

| | |
|---|---|
|  | NOTICE |
| | Long tower elements are not available for all of the 4.5 m tower elements and cannot be replaced with these. However, have the option of using long tower elements of a higher grade (e.g. UT 20 replaced with UV 20.4 L). In this case, it is usually required to insert additional platforms. |

The diagram below shows where you can install long tower elements.

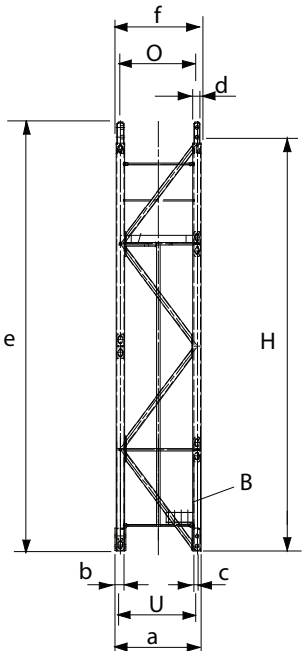
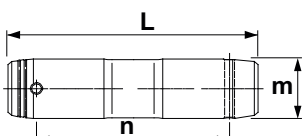
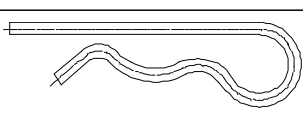
| | |
|---|--|
|  | NOTICE |
| | The letters A to H are placeholders for any WOLFF tower element. The same letter means the same tower element. |

1 Tower elements and joining frames



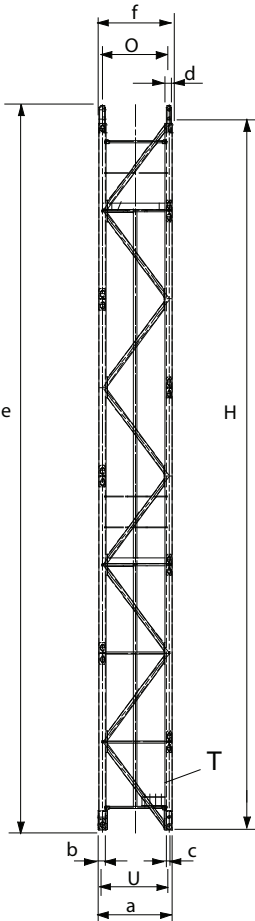
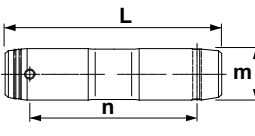
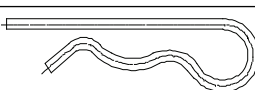
Applications with long tower elements

1.2 Tower system 1.2 m (TFS 12)

| Tower element | | TFS 12 | | B = component identifier |
|-------------------|----|------------|--|---|
| Weight | kg | 1350 | |  |
| Dimensions | | | | |
| a | mm | 1200 | | |
| b | mm | 120 | | |
| c | mm | 98 | | |
| d | mm | 93 | | |
| e | mm | 5893 | | |
| f | mm | 1200 | | |
| g | mm | - | | |
| System dimensions | | | | |
| H | mm | 5750 | | |
| O | mm | 1080 | | |
| U | mm | 1080 | | |
| Knock-in bolts | | | |  |
| Order no. | | 30 000 003 | | |
| L | mm | 220 | | |
| m | mm | 50 | | |
| n | mm | 155 | | |
| Quantity | | 8 | | |
| Spring retainers | | | |  |
| Order no. | | 10 005 518 | | |
| Ø | mm | 6 | | |
| Quantity | | 16 | | |

1 Tower elements and joining frames

1.3 Tower system 1.2 m (TFS 12 LC)

| Tower element | | TFS 12 LC | | B = component identifier |
|-------------------|----|------------|--|---|
| Weight | kg | 2630 | |  |
| Dimensions | | | | |
| a | mm | 1200 | | |
| b | mm | 120 | | |
| c | mm | 98 | | |
| d | mm | 93 | | |
| e | mm | 11785 | | |
| f | mm | 1200 | | |
| g | mm | - | | |
| System dimensions | | | | |
| H | mm | 11500 | | |
| O | mm | 1080 | | |
| U | mm | 1080 | | |
| Knock-in bolts | | | |  |
| Order no. | | 30 000 003 | | |
| L | mm | 220 | | |
| m | mm | 50 | | |
| n | mm | 155 | | |
| Quantity | | 8 | |  |
| Spring retainers | | | | |
| Order no. | | 10 005 518 | | |
| Ø | mm | 6 | | |
| Quantity | | 16 | | |

1.4 Transition tower system 1.2 m - 1.5 m (TFSÜ 12)

| Tower element | | TFSÜ 12 | | B = component identifier |
|-------------------|----|------------|--|--------------------------|
| Weight | kg | 1630 | | |
| Dimensions | | | | |
| a | mm | 1500 | | |
| b | mm | 120 | | |
| c | mm | 98 | | |
| d | mm | 93 | | |
| e | mm | 4785 | | |
| System dimensions | | | | |
| H | mm | 4500 | | |
| O | mm | 1080 | | |
| U | mm | 1379 | | |
| Knock-in bolts | | | | |
| Order no. | | 30 000 003 | | |
| L | mm | 220 | | |
| m | mm | 50 | | |
| n | mm | 155 | | |
| Quantity | | 8 | | |
| Spring retainers | | | | |
| Order no. | | 10 005 518 | | |
| Ø | mm | 6 | | |
| Quantity | | 16 | | |

1 Tower elements and joining frames

1.5 Tower system 1.5 m (TSL 15.4, TFSA 15.4, TFS 15.4)

| Tower element | | TSL 15 .4 | TFSA 15.4 | TFS 15.4 | B = component identifier |
|------------------|----|------------|------------|------------|--------------------------|
| Weight | kg | 1140 | 1390 | 1410 | |
| Dimensions | | | | | |
| a | mm | 1500 | 1500 | 1500 | |
| b | mm | 110 | 121 | 121 | |
| c | mm | 90 | 98 | 98 | |
| d | mm | 85 | 85 | 93 | |
| e | mm | 1500 | 1500 | 1500 | |
| f | mm | 1610 | 1610 | 1610 | |
| g | mm | 4490 | 4490 | 4490 | |
| h | mm | 295 | 295 | 295 | |
| i | mm | 4785 | 4785 | 4785 | |
| Knock-in bolts | | | | | |
| Order no. | | 30 000 003 | 30 000 003 | 30 000 003 | |
| L | mm | 220 | 220 | 220 | |
| m | mm | 50 | 50 | 50 | |
| n | mm | 155 | 155 | 155 | |
| Quantity | | 8 | 8 | 8 | |
| Spring retainers | | | | | |
| Order no. | | 10 005 518 | 10 005 518 | 10 005 518 | |
| Ø | mm | 6 | 6 | 6 | |
| Quantity | | 16 | 16 | 16 | |

1.6 Tower system 1.5 m (TFS 15.4 L, UV 15.4 L)

| Tower element | | TFS 15.4 L | UV 15.4 L | | B = component identifier |
|------------------|----|------------|------------|--|--------------------------|
| Weight | kg | 3450 | 4340 | | |
| Dimensions | | | | | |
| a | mm | 1500 | 1500 | | |
| b | mm | - | - | | |
| c | mm | 13500 | 13500 | | |
| d | mm | 13785 | 13815 | | |
| e | mm | 93 | 118 | | |
| f | mm | - | - | | |
| g | mm | - | - | | |
| h | mm | - | - | | |
| i | mm | - | - | | |
| Knock-in bolts | | | | | |
| Order no. | | 30 000 003 | 30 000 02 | | |
| L | mm | 220 | 275 | | |
| m | mm | 50 | 60 | | |
| n | mm | 155 | 192 | | |
| Quantity | | 8 | 8 | | |
| Spring retainers | | | | | |
| Order no. | | 10 005 518 | 10 005 519 | | |
| Ø | mm | 6 | 10 | | |
| Quantity | | 16 | 16 | | |

1 Tower elements and joining frames

1.7 Tower system 1.5 m (UVA 15.4, UV 15.4)

| Tower element | | UVA 15.4 | UV 15.4 | B = component identifier |
|-------------------------|----|-----------|------------|--------------------------|
| Weight | kg | 2015 | 1750 | |
| Dimensions | | | | |
| a | mm | 1500 | 1500 | |
| b | mm | 151 | 151 | |
| c | mm | 126 | 126 | |
| d | mm | 93 | 118 | |
| e | mm | 1500 | 1500 | |
| f | mm | 1610 | 1610 | |
| g | mm | 4490 | 4490 | |
| h | mm | 295 | 325 | |
| i | mm | 4785 | 4815 | |
| Knock-in bolts | | | | |
| Order no. | | 30 000 02 | 30 000 002 | |
| L | mm | 275 | 275 | |
| m | mm | 60 | 60 | |
| n | mm | 192 | 192 | |
| Quantity | | 8 | 8 | |
| Spring retainers | | | | |
| Order no. | | 10 005 19 | 10 005 519 | |
| Ø | mm | 10 | 10 | |
| Quantity | | 16 | 16 | |

1.8 Transition tower system 1.5 m - 2.0 m (TÜ 15.4, UVÜ 15.4)

| Tower element | | TÜ 15.4 | UVÜ 15.4 | B = component identifier |
|------------------|----|------------|------------|--------------------------|
| Weight | kg | 1610 | 2270 | |
| Dimensions | | | | |
| a | mm | 2000 | 2000 | |
| b | mm | 121 | 151 | |
| c | mm | 96 | 124 | |
| d | mm | 93 | 118 | |
| e | mm | 1500 | 1500 | |
| f | mm | - | - | |
| g | mm | 4490 | 4490 | |
| h | mm | 295 | 325 | |
| i | mm | 4785 | 4815 | |
| Knock-in bolts | | | | |
| Order no. | | 30 000 003 | 23 000 002 | |
| L | mm | 220 | 275 | |
| m | mm | 50 | 60 | |
| n | mm | 155 | 192 | |
| Quantity | | 8 | 8 | |
| Spring retainers | | | | |
| Order no. | | 100 055 18 | 10 055 19 | |
| Ø | mm | 6 | 10 | |
| Quantity | | 16 | 16 | |

1 Tower elements and joining frames

1.9 Tower system 2.0 m (1/2 UV 20.4)

| Tower element | | 1/2 UV 20.4 | | | B = component identifier |
|------------------|----|-------------|--|--|--------------------------|
| Weight | kg | 1230 | | | |
| Dimensions | | | | | |
| a | mm | 2000 | | | |
| b | mm | 151 | | | |
| c | mm | 126 | | | |
| d | mm | 118 | | | |
| e | mm | 2000 | | | |
| f | mm | - | | | |
| g | mm | 2242 | | | |
| h | mm | 325 | | | |
| i | mm | 2567 | | | |
| Knock-in bolts | | | | | |
| Order no. | | 23 000 002 | | | |
| L | mm | 275 | | | |
| m | mm | 60 | | | |
| n | mm | 192 | | | |
| Quantity | | 8 | | | |
| Spring retainers | | | | | |
| Order no. | | 10 005 519 | | | |
| Ø | mm | 10 | | | |
| Quantity | | 16 | | | |

1.10 Tower system 2.0 m (TFS 20.4, UVA 20.4, UV 20.4)

| Tower element | | TFS 20.4 | UVA 20.4 | UV 20.4 | B = component identifier |
|------------------|----|------------|------------|------------|--------------------------|
| Weight | kg | 1560 | 1880 | 1940 | |
| Dimensions | | | | | |
| a | mm | 2000 | 2000 | 2000 | |
| b | mm | 121 | 151 | 151 | |
| c | mm | 99 | 126 | 126 | |
| d | mm | 93 | 93 | 118 | |
| e | mm | 2000 | 2000 | 2000 | |
| f | mm | 2120 | 2120 | 2120 | |
| g | mm | 4490 | 4490 | 4490 | |
| h | mm | 295 | 295 | 325 | |
| i | mm | 4785 | 4785 | 4815 | |
| Knock-in bolts | | | | | |
| Order no. | | 30 000 003 | 30 000 002 | 30 000 002 | |
| L | mm | 220 | 275 | 275 | |
| m | mm | 50 | 60 | 60 | |
| n | mm | 155 | 192 | 192 | |
| Quantity | | 8 | 8 | 8 | |
| Spring retainers | | | | | |
| Order no. | | 10 005 518 | 10 005 519 | 10 005 519 | |
| Ø | mm | 6 | 10 | 10 | |
| Quantity | | 16 | 16 | 16 | |

1 Tower elements and joining frames

1.11 Tower system 2.0 m (UV 20.4 LC)

| Tower element | | UV 20.4 LC | | B = component identifier |
|------------------|----|------------|--|--------------------------|
| Weight | kg | 4430 | | |
| Dimensions | | | | |
| a | mm | 2004 | | |
| b | mm | 155 | | |
| c | mm | 126 | | |
| d | mm | 118 | | |
| e | mm | 2004 | | |
| f | mm | - | | |
| g | mm | 11245 | | |
| h | mm | 325 | | |
| i | mm | 11600 | | |
| Knock-in bolts | | | | |
| Order no. | | 23 000 002 | | |
| L | mm | 275 | | |
| m | mm | 60 | | |
| n | mm | 192 | | |
| Quantity | | 8 | | |
| Spring retainers | | | | |
| Order no. | | 10 005 519 | | |
| Ø | mm | 10 | | |
| Quantity | | 16 | | |

1.12 Tower system 2.0m (TV 20.4 K)

| Tower element | | TV 20.4 K | | | B = component identifier |
|---------------------|----|-----------|--|--|--------------------------|
| Weight | kg | 1866 | | | |
| Dimensions | | | | | |
| a | mm | 2030 | | | |
| b | mm | 182 | | | |
| c | mm | 140 | | | |
| d | mm | 147 | | | |
| e | mm | 1818 | | | |
| f | mm | 2590 | | | |
| G* | mm | 2240 | | | |
| h | mm | 350 | | | |
| Ø1 | mm | 70 | | | |
| Ø2 | mm | 70 | | | |
| * System dimensions | | | | | |
| Knock-in bolts | | | | | |
| Order no. | | 30000001 | | | |
| L | mm | 295 | | | |
| m | mm | 70 | | | |
| n | mm | 228 | | | |
| Quantity | | 8 | | | |
| Spring retainers | | | | | |
| Order no. | | 10022204 | | | |
| Ø | mm | 10 | | | |
| Quantity | | 16 | | | |

1 Tower elements and joining frames

1.13 Tower system 2.0 m (TVA 20.4, TV 20.4)

| Tower element | | TVA 20.4 | TV 20.4 | | B = component identifier |
|---------------------|----|------------|------------|--|--------------------------|
| Weight | kg | 3080 | 2980 | | |
| Dimensions | | | | | |
| a | mm | 2000 | 2000 | | |
| b | mm | 182 | 182 | | |
| c | mm | 147 | 147 | | |
| d | mm | 118 | 140 | | |
| e | mm | 2000 | 2000 | | |
| f | mm | 2120 | 2120 | | |
| g* | mm | 4500 | 4500 | | |
| h | mm | 325 | 350 | | |
| i | mm | 4815 | 4840 | | |
| * System dimensions | | | | | |
| Knock-in bolts | | | | | |
| Order no. | | 30 000 001 | 30 000 001 | | |
| L | mm | 295 | 295 | | |
| m | mm | 70 | 70 | | |
| n | mm | 228 | 228 | | |
| Quantity | | 8 | 8 | | |
| Spring retainers | | | | | |
| Order no. | | 10 005 519 | 10 005 519 | | |
| Ø | mm | 10 | 10 | | |
| Quantity | | 16 | 16 | | |

1.14 Tower system 2.0 m (TFS 20.4 L, UV 20.4 L, TV 20.4 L)

| Tower element | | TFS 20.4 L | UV 20.4 L | TV 20.4 L | B = component identifier |
|------------------|----|------------|------------|------------|--------------------------|
| Weight | kg | 4180 | 5410 | 7835 | |
| Dimensions | | | | | |
| a | mm | 2003 | 2004 | 2000 | |
| b | mm | | | | |
| c | mm | 13500 | 13500 | 13500 | |
| d | mm | 13785 | 13815 | 13840 | |
| e | mm | 93 | 118 | 140 | |
| f | mm | | | | |
| g | mm | | | | |
| h | mm | | | | |
| i | mm | | | | |
| Knock-in bolts | | | | | |
| Order no. | | 30 000 003 | 30 000 002 | 30 000 001 | |
| L | mm | 220 | 275 | 295 | |
| m | mm | 50 | 60 | 70 | |
| n | mm | 155 | 192 | 228 | |
| Quantity | | 8 | 8 | 8 | |
| Spring retainers | | | | | |
| Order no. | | 10 005 518 | 10 005 519 | 10 022 204 | |
| Ø | mm | 6 | 10 | 10 | |
| Quantity | | 16 | 16 | 16 | |

1 Tower elements and joining frames

1.15 Transition tower system 2.0 m - 2.5 m (TVÜ 20.4)

| Tower element | | TVÜ 20.4 | | | B = component identifier |
|------------------|----|------------|--|--|--------------------------|
| Weight | kg | 3440 | | | |
| Dimensions | | | | | |
| a | mm | 2500 | | | |
| b | mm | 182 | | | |
| c | mm | 147 | | | |
| d | mm | 140 | | | |
| e | mm | 2000 | | | |
| f | mm | - | | | |
| g | mm | 4500 | | | |
| h | mm | 350 | | | |
| i | mm | 4840 | | | |
| Knock-in bolts | | | | | |
| Order no. | | 30 000 001 | | | |
| L | mm | 295 | | | |
| m | mm | 70 | | | |
| n | mm | 228 | | | |
| Quantity | | 8 | | | |
| Spring retainers | | | | | |
| Order no. | | 10 005 519 | | | |
| Ø | mm | 10 | | | |
| Quantity | | 16 | | | |

1.16 Transition tower system 2.0 m - 2.3 m suitable for TV 20 and TV 23 tower elements (joining frame VR 2023)

| Joining frame | | VR 2023 | B = component identifier |
|---------------------|----|----------|--------------------------|
| Weight | kg | 2417 | |
| Dimensions | | | |
| a | mm | 2780 | |
| b | mm | 219 | |
| c | mm | 140 | |
| d | mm | 140 | |
| e | mm | 2324 | |
| f | mm | 1350 | |
| G* | mm | 990 | |
| h | mm | 360 | |
| * System dimensions | | | |
| Knock-in bolts | | | |
| Order no. | | 30051034 | |
| L | mm | 303 | |
| m | mm | 70 | |
| n | mm | 239 | |
| Quantity | | 8 | |
| Linch pin | | | |
| Order no. | | 10024804 | |
| Ø | mm | 10 | |
| L | mm | 100 | |
| Quantity | | 16 | |

1 Tower elements and joining frames

1.17 Transition tower system 2.0 m - 2.3 m suitable for TV 20 and HT 23 tower elements (TVÜ 20-23)

| Joining frame | | TVÜ 20-23 | B = component identifier |
|---------------------|----|-----------|--------------------------|
| Weight | kg | 4298 | |
| Dimensions | | | |
| a | mm | 2074 | |
| b | mm | 2290 | |
| c | mm | 4850 | |
| d | mm | 2034 | |
| e | mm | 1818 | |
| F* | mm | 4500 | |
| Ø1 | mm | 70 | |
| Ø2 | mm | 60 | |
| * System dimensions | | | |
| Push pin | | | |
| Order no. | | 30050624 | |
| L | mm | 330 | |
| m | mm | 60 | |
| n | mm | 266 | |
| Quantity | | | |
| Linch pin | | | |
| Order no. | | 10025012 | |
| Ø | mm | 10 | |
| L | mm | 75 | |
| Quantity | | 16 | |

1.18 Tower system 2.3 m (TV 23, HT 23, HTA 23)

| Tower element | | TV 23 | HT 23 | HTA 23 | B = component identifier |
|---------------------|----|----------|----------|----------|--------------------------|
| Weight | kg | 3041 | 3936 | 4490 | |
| Dimensions | | | | | |
| a | mm | 2320 | 2320 | 2305 | |
| b | mm | 212 | 216 | 216 | |
| c | mm | 147 | 176 | 176 | |
| d | mm | 140 | 165 | 138 | |
| e | mm | 2108 | 2074 | 2074 | |
| f | mm | 4840 | 4840 | 4840 | |
| G* | mm | 4500 | 4500 | 4500 | |
| h | mm | 340 | 340 | 340 | |
| Ø1 | mm | 70 | 60 | 70 | |
| Ø2 | mm | 70 | 60 | 60 | |
| * System dimensions | | | | | |
| Knock-in bolts | | | | | |
| Order no. | | 30050630 | 30050624 | 30050624 | |
| L | mm | 296 | 330 | 330 | |
| m | mm | 70 | 60 | 60 | |
| n | mm | 232 | 266 | 266 | |
| Quantity | | 8 | 8 | 8 | |
| Linch pin | | | | | |
| Order no. | | 10024804 | 10025012 | 10025012 | |
| Ø | mm | 10 | 10 | 10 | |
| L | mm | 100 | 75 | 75 | |
| Quantity | | 16 | 16 | 16 | |

1 Tower elements and joining frames

1.19 Tower system 2.3 m (BT 23)

| Tower element | | BT 23 | | B = component identifier |
|----------------------------|--------------------------|----------|--------------------------|--------------------------|
| Weight | kg | 11380 | | |
| Dimensions | | | | |
| a | mm | 2320 | | |
| b | mm | 266 | | |
| c | mm | 226 | | |
| d | mm | 166 | | |
| E* | mm | 2074 | | |
| f | mm | 11590 | | |
| G* | mm | 11250 | | |
| h | mm | 350 | | |
| i | mm | 160 | | |
| J* | mm | 2024 | | |
| Ø1 | mm | 70 | | |
| Ø2 | mm | 60 | | |
| * System dimensions | | | | |
| | Knock-in bolts, Ø 70 mm | | Knock-in bolts, Ø 60 mm | |
| Order no. | | 10024746 | | 10024744 |
| L | mm | 380 | | 365 |
| m | mm | 70 | | 60 |
| n | mm | 320 | | 305 |
| Quantity | | 8 | | 8 |
| | Linch pin, Ø 70 mm bolts | | Linch pin, Ø 60 mm bolts | |
| Order no. | | 10024804 | | 10025012 |
| Ø | mm | 10 | | 10 |
| L | mm | 100 | | 75 |
| Quantity | | 16 | | 16 |

1.20 Transition tower system 2.3 m / 2.5 m – 2.9 m suitable for UV 29 tower elements (joining frame VR 23/25-29)

| Joining frame VR 23/25-29 | | | | | B = component identifier |
|------------------------------------|-------|----------|-------|-------|--------------------------|
| Weight [kg] | | 4275 | | | |
| Dimension [mm] | | | | | |
| Tower system | TV 23 | HT 23 | TV 25 | UV 25 | |
| a | 3550 | | | | |
| b | 280 | | | | |
| c | 220 | | | | |
| d* | 140 | 160 | 140 | 156 | |
| e | 2860 | | | | |
| f | 2940 | | | | |
| h* | 452 | 487 | 452 | 462 | |
| Ø 1 | 65 | | | | |
| Ø 2* | 70 | 60 | 70 | 70 | |
| System dimensions [mm] | | | | | |
| G | 1200 | | | | |
| O* | 2108 | 2074 | 2318 | 2298 | |
| U | 2580 | | | | |
| * varies depending on tower system | | | | | |
| Knock-in bolts | | | | | |
| Order no. | | 30038975 | | | |
| L | mm | 380 | | | |
| m | mm | 65 | | | |
| n | mm | 297 | | | |
| Quantity | | 8 | | | |
| Linch pin | | | | | |
| Order no. | | 10024804 | | | |
| Ø | mm | 10 | | | |
| L | mm | 100 | | | |
| Quantity | | 16 | | | |

| Accessories | VR 23/25-29 | | Hole pattern |
|-----------------------|--------------|-----------|--------------|
| Set of bolted spigots | Tower system | Order no. | |
| AZ 140 E 17 | TV 23 | 30049645 | |
| AZ 160 HT 23 | HT 23 | 30049646 | |
| AZ 140 E 10 | TV 25 | 30049643 | |
| AZ 156 M | UV 25 | 30049644 | |

1 Tower elements and joining frames

1.21 Transition tower system 2.3 m / 2.5 m – 2.9 m suitable for TV 29 tower elements (joining frame VR 23/25-29.1)

| Joining frame VR 23/25-29.1 | | | | | B = component identifier | |
|---|-------|-----------|-------|------------|--------------------------|--|
| Weight [kg] (without adapter frame and bolted spigots) | | 4650 | | | | |
| Weight [kg] adapter frame | | 1700 | | | | |
| Dimensions [mm] | | | | | | |
| Tower system | TV 23 | HT 23 | TV 25 | UV 25 | | |
| a | 3550 | | | | | |
| b | 265 | | | | | |
| c | 225 | | | | | |
| d* | 140 | 160 | 140 | 156 | | |
| e | 2830 | | | | | |
| f | 2940 | | | | | |
| g | 1110 | | | | | |
| h* | 452 | 487 | 452 | 462 | | |
| Ø 1 | 70 | 60 | 70 | 70 | | |
| Ø 2* | 70 | | | | | |
| System dimensions [mm] | | | | | | |
| G | 1200 | | | | | |
| O* | 2108 | 2074 | 2318 | 2298 | | |
| U | 2565 | | | | | |
| Knock-in bolts | | | | | | |
| Order no. | | 10024746 | | | | |
| L | mm | 380 | | | | |
| m | mm | 70 | | | | |
| n | mm | 316 | | | | |
| Quantity | 16 | | | | | |
| securing elements | | | | | | |
| | | Linch pin | | Cotter pin | | |
| Order no. | | 10024804 | | 10006073 | | |
| Ø | mm | 10 | | 10 | | |
| L | mm | 100 | | 90 | | |
| Quantity | 16 | | 16 | | | |
| | | | | | | |

* varies depending on tower system


| Set of bolted spigots | | | | |
|-----------------------|--------|--------------|-----------|--------------|
| Item | Weight | Tower system | Order no. | Hole pattern |
| AZ 140 E 17 | 875 kg | TV 23 | 30049645 | |
| AZ 160 M HT 23 | 905 kg | HT 23 | 30049646 | |
| AZ 140 E 10 | 790 kg | TV 25 | 30049643 | |

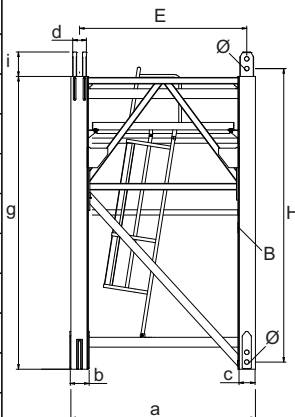
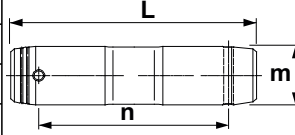
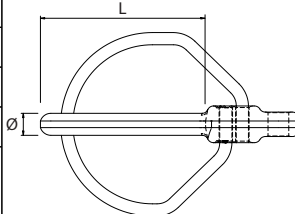
1.22 Tower system 2.9 m (UV 29)

| Tower element | | UV 29 | | | B = component identifier |
|---------------------|----|------------|--|--|--------------------------|
| Weight | kg | 4550 | | | |
| Dimensions | | | | | |
| a | mm | 2830 | | | |
| b | mm | 250 | | | |
| c | mm | 218 | | | |
| d | mm | 208 | | | |
| e | mm | 200 | | | |
| f | mm | 2830 | | | |
| g* | mm | 4500 | | | |
| h | mm | 360 | | | |
| i | mm | 4850 | | | |
| * System dimensions | | | | | |
| Knock-in bolts | | | | | |
| Order no. | | 30 038 975 | | | |
| L | mm | 380 | | | |
| m | mm | 65 | | | |
| n | mm | 297 | | | |
| Quantity | | 8 | | | |
| Spring retainers | | | | | |
| Order no. | | 10 022 204 | | | |
| Ø | mm | 10 | | | |
| Quantity | | 16 | | | |

1 Tower elements and joining frames

1.23 Tower system 2.9m (TV 29)

| | |
|---|--|
|  | NOTICE |
| | <p>Thrust screws M20 only for assembly purposes.</p> <p>The corner posts of the tower element have 4 holes (M20) to compensate tolerances. The thrust screws are not comprised in the scope of delivery. Remove the screws after assembly of the tower elements immediately.</p> |

| Tower element | | TV 29 | | | B = component identifier |
|---------------------|----|----------|--|--|---|
| Weight | kg | 5660 | | |  |
| Dimensions | | | | | |
| a | mm | 2845 | | | |
| b | mm | 265 | | | |
| c | mm | 225 | | | |
| d | mm | 210 | | | |
| E* | mm | 2565 | | | |
| f | mm | 4865 | | | |
| g | mm | 4490 | | | |
| H* | mm | 4500 | | | |
| i | mm | 375 | | | |
| Ø | mm | 70 | | | |
| * System dimensions | | | | | |
| Push pin | | | | | |
| Order no. | | 10032472 | | |  |
| L | mm | 400 | | | |
| m | mm | 70 | | | |
| n | mm | 316 | | | |
| Quantity | | 8 | | | |
| Linch pin | | | | | |
| Order no. | | 10024804 | | |  |
| L | mm | 100 | | | |
| Ø | mm | 10 | | | |
| Quantity | | 16 | | | |

1.24 Tower system 2.9 m (BT 29)

| Tower element | | BT 29 | | | B = component identifier |
|---------------|----|-------|--|--|--------------------------|
| Weight | kg | 9205 | | | |
| Dimensions | | | | | |
| a | mm | 3010 | | | |
| b Ø | mm | 430 | | | |
| c Ø | mm | 360 | | | |
| d | mm | 208 | | | |
| e | mm | 200 | | | |
| f | mm | 2830 | | | |
| g | mm | 9980 | | | |
| h | mm | 370 | | | |
| i | mm | 10350 | | | |
| System length | mm | 10000 | | | |

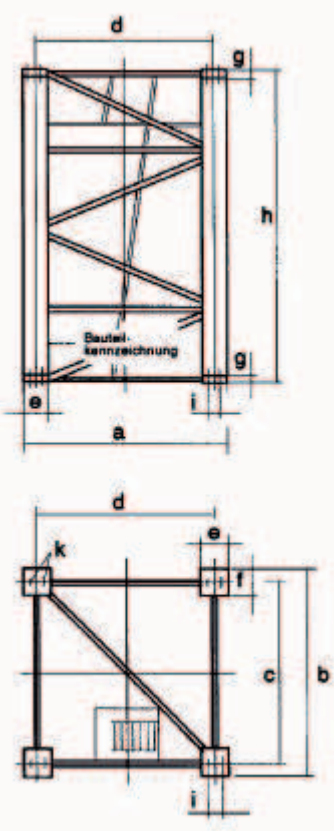
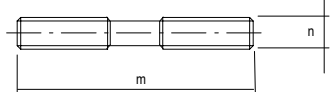
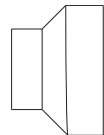
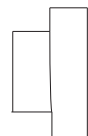
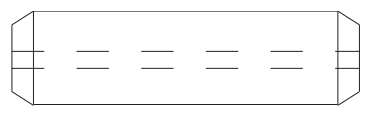
1 Tower elements and joining frames

1.25 Transition tower system 2.9 m - 3.3 m (Joining frame VR 2933)

| Joining frame | | VR 2933 | B = component identifier |
|---------------------------------|----|-----------|--------------------------|
| Weight (without bolted spigots) | kg | 8140 | |
| Dimensions | | | |
| a | mm | 3370 | |
| b | mm | 537 | |
| c ¹ | mm | 210 | |
| d | mm | 1760 | |
| Ø | mm | 70 | |
| F* | mm | 2853 | |
| G* | mm | 2037 | |
| H* | mm | 2565 | |
| ¹ Bolted spigots | | | |
| * System dimensions | | | |
| Threaded bolts | | | |
| Order no. | | 30025249 | |
| m | mm | 610 | |
| n | mm | M90 x 4 | |
| Quantity | | 8 | |
| Expansion sleeves | | | |
| Order no. | | 30025245 | |
| Ø | mm | 199 x 100 | |
| Quantity | | 8 | |
| collar nut | | | |
| Order no. | | 30025247 | |
| Dimensions | mm | M 90 x 4 | |
| Quantity | | 16 | |

| Set of bolted spigots | | | |
|-----------------------|---------|--------------|-----------|
| Item | Weight | Tower system | Order no. |
| AZ 210 VR 2933 | 1720 kg | TV 29 | 30054404 |

1.26 Tower system 3.3m (TV 33)

| Tower element | | TV 33 | B = component identifier |
|-------------------|----|-----------|---|
| Weight | kg | 9450 |  |
| Dimensions | | | |
| a | mm | 3250 | |
| b | mm | 3330 | |
| c | mm | 2943 | |
| d | mm | 2853 | |
| e | mm | 397 | |
| f | mm | 400 | |
| g | mm | 145 | |
| h | mm | 5000 | |
| i | mm | 240 | |
| K Ø | mm | 93 | |
| Threaded bolts | | |  |
| Order no. | | 30025249 | |
| m | mm | 610 | |
| n | mm | M 90 x 4 | |
| Quantity | | 8 | |
| Expansion sleeves | | |  |
| Order no. | | 30025245 | |
| Ø | mm | 199 x 100 | |
| Quantity | | 8 | |
| collar nut | | |  |
| Order no. | | 30025247 | |
| Dimensions | mm | M 90 x 4 | |
| Quantity | | 16 | |
| Dowel pin | | |  |
| Order no. | | 30025244 | |
| Dimensions | mm | 40 x 90 | |
| Quantity | | 4 | |

WOLFFKRAN Group

Headquarter international:

WOLFFKRAN AG

Baarermattstraße 6

CH-6300 Zug

Switzerland

Phone +41 41 766 85 00

Fax +41 41 766 85 99

info@wolffkran.com

Manufacturing:

WOLFFKRAN GmbH

Austraße 72

D-74076 Heilbronn

Germany

Phone + 49 7131 9815 0

Fax + 49 7131 9815 355

info@wolffkran.de

WOLFFKRAN Werk Brandenburg GmbH

Frederik-Ipsen-Straße 5

D-15926 Luckau OT Altno

Germany

Phone + 49 35456 674 0

Fax + 49 35456 674 200

info@wolffkran.de