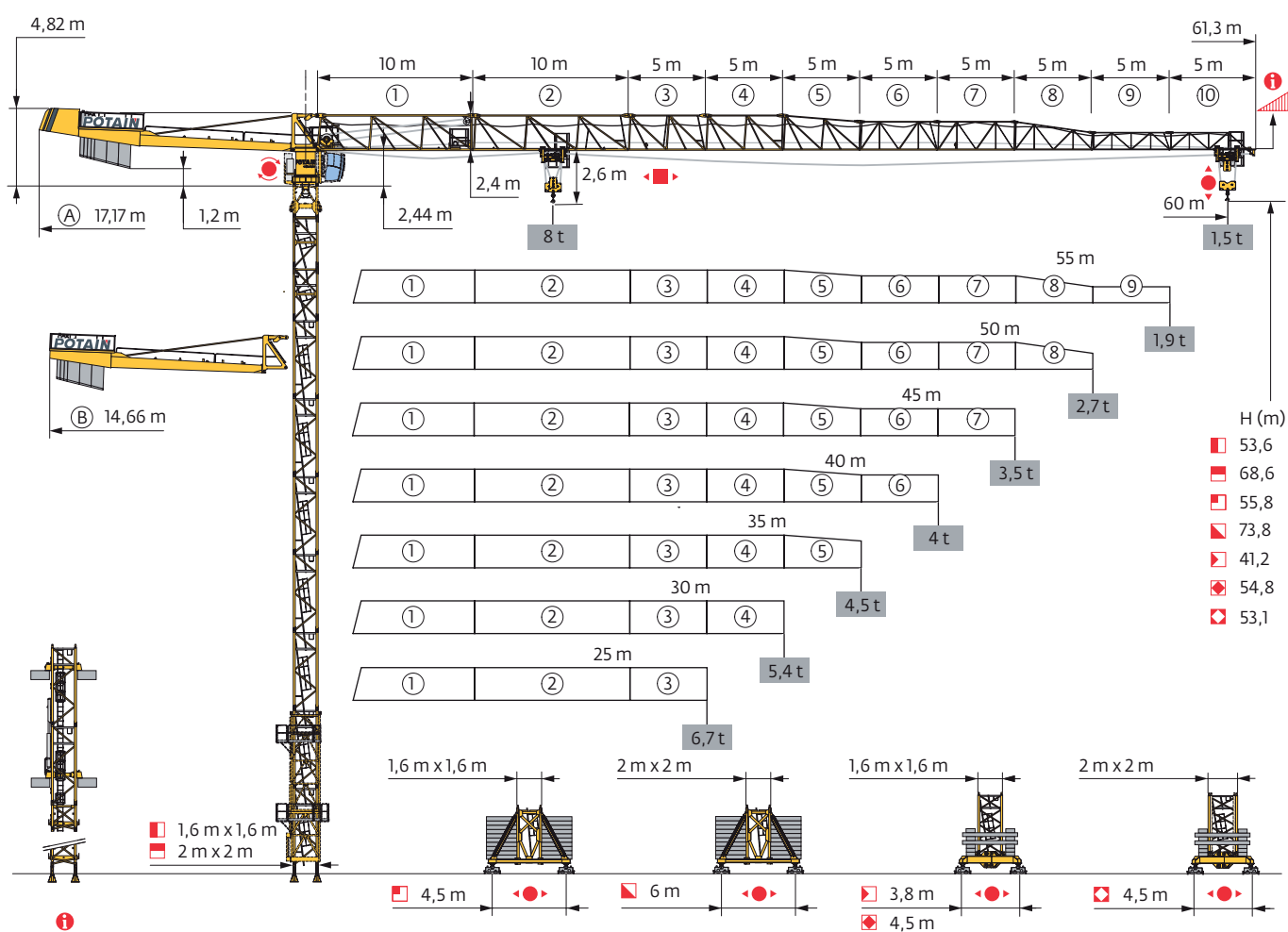
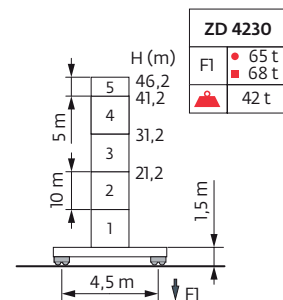
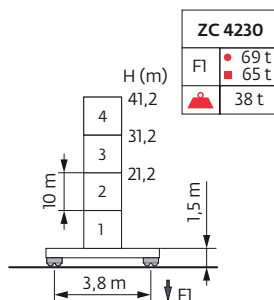
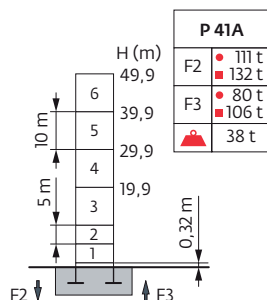


## MDT 178

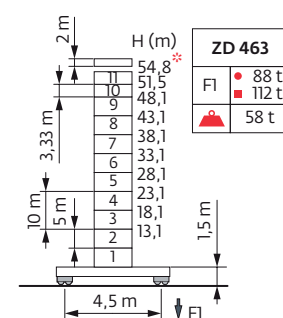
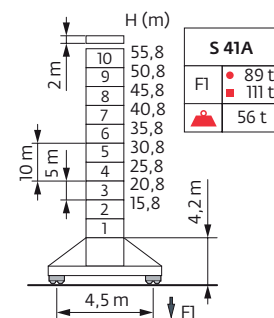
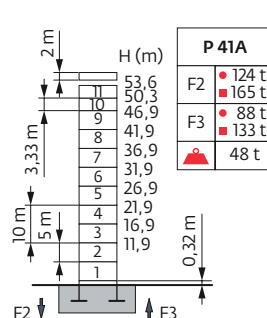


Mât - Réactions / Mast - Reaktionskräfte / Mast - Reactions / Mástil - Reacciones / Torre - Reazioni  
Tramo - Reações / Реакция опор мачты

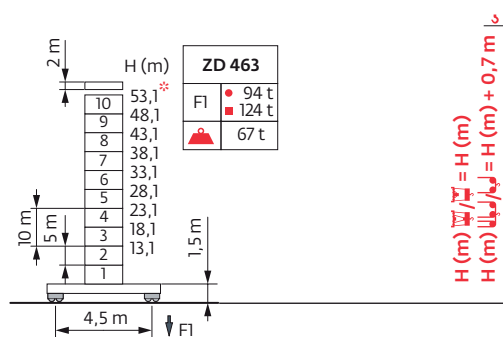
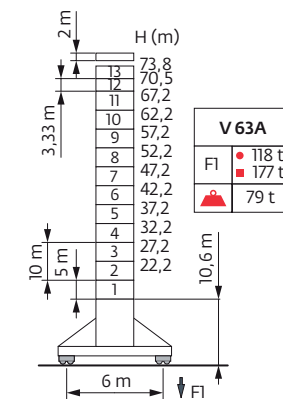
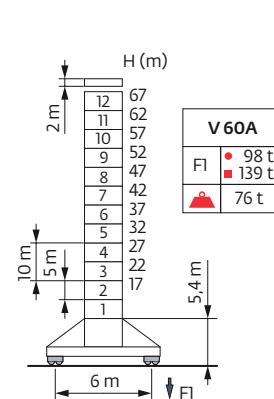
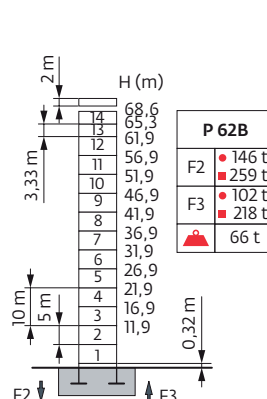
1,6 m City  
25 m → 60 m



1,6 m  
25 m → 60 m



2 m  
25 m → 60 m



S 41A H1 = H H2 = H - 0,3 m H3 = H - 0,7 m

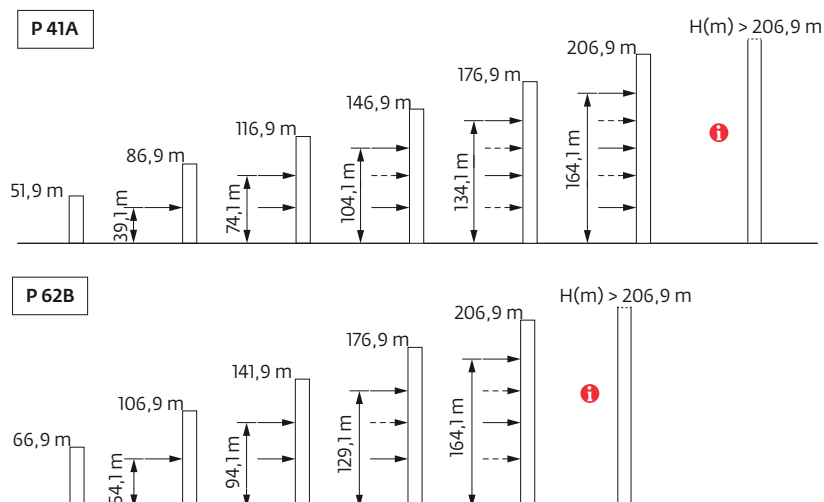
V 60A H1 = H H2 = H - 0,4 m H3 = H - 0,8 m

V 63A H1 = H H2 = H - 0,5 m H3 = H - 0,9 m

ZC 4230 ZD 4230 H1 = H H2 = H + 0,3 m H3 = H + 0,2 m

ZD 463 H1 = H H2 = H H3 = H - 0,1 m

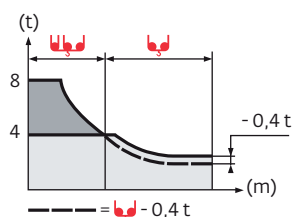
Ancrages / Verankerungen / Anchorages / Anclajes / Ancoraggi / Ancoragem / нкера



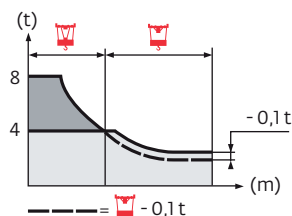
Courbes de charges / Lastkurven / Load curves / Curvas de cargas / Curve di carico / Curvas de carga / Кривые нагрузок



|      |      |   |      |      |      |      |      |      |      |      |      |      |      |      |      |     |      |      |     |     |     |     |   |
|------|------|---|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|------|------|-----|-----|-----|-----|---|
| 60 m | 2,75 | ► | 14,3 | 15   | 17   | 20   | 22   | 25,2 | 27,4 | 30   | 32   | 35   | 37   | 40   | 42   | 45  | 47   | 50   | 52  | 55  | 57  | 60  | m |
| ▲▲▲▲ |      |   | 8    | 7,5  | 6,5  | 5,3  | 4,7  | 4    | 4    | 3,6  | 3,3  | 3    | 2,8  | 2,55 | 2,4  | 2,2 | 2,05 | 1,9  | 1,8 | 1,7 | 1,6 | 1,5 | t |
| 55 m | 2,75 | ► |      | 15,6 | 17   | 20   | 22   | 25   | 27,5 | 29,9 | 32   | 35   | 37   | 40   | 42   | 45  | 47   | 50   | 52  | 55  |     |     | m |
| ▲▲▲▲ |      |   | 8    | 7,2  | 5,9  | 5,3  | 4,5  | 4    | 4    | 3,7  | 3,3  | 3,1  | 2,85 | 2,65 | 2,45 | 2,3 | 2,15 | 2,05 | 1,9 |     |     | t   |   |
| 50 m | 2,75 | ► |      |      | 18,6 | 20   | 22   | 25   | 27   | 30   | 33,1 | 35,9 | 37   | 40   | 42   | 45  | 47   | 50   |     |     |     |     | m |
| ▲▲▲▲ |      |   | 8    |      | 7,4  | 6,6  | 5,6  | 5,1  | 4,5  | 4    | 3,9  | 3,5  | 3,3  | 3,1  | 2,9  | 2,7 |      |      |     |     |     | t   |   |
| 45 m | 2,75 | ► |      |      |      | 20,7 | 22   | 25   | 27   | 30   | 32   | 35   | 36,9 | 40,1 | 42   | 45  |      |      |     |     |     |     | m |
| ▲▲▲▲ |      |   | 8    |      |      | 7,5  | 6,4  | 5,9  | 5,2  | 4,8  | 4,3  | 4    | 3,8  | 3,5  |      |     |      |      |     |     |     | t   |   |
| 40 m | 2,75 | ► |      |      |      |      | 20,7 | 22   | 25   | 27   | 30   | 32   | 35   | 36,8 | 40   |     |      |      |     |     |     |     | m |
| ▲▲▲▲ |      |   | 8    |      |      |      | 7,4  | 6,4  | 5,8  | 5,2  | 4,8  | 4,3  | 4    |      |      |     |      |      |     |     |     | t   |   |
| 35 m | 2,75 | ► |      |      |      |      |      | 20,8 | 22   | 25   | 27   | 30   | 32   | 35   |      |     |      |      |     |     |     |     | m |
| ▲▲▲▲ |      |   | 8    |      |      |      |      | 7,5  | 6,5  | 5,9  | 5,2  | 4,8  | 4,3  |      |      |     |      |      |     |     |     | t   |   |
| 30 m | 2,75 | ► |      |      |      |      |      |      | 20,8 | 22   | 25   | 27   | 30   |      |      |     |      |      |     |     |     |     | m |
| ▲▲▲▲ |      |   | 8    |      |      |      |      |      | 7,5  | 6,5  | 5,9  | 5,2  |      |      |      |     |      |      |     |     |     | t   |   |
| 25 m | 2,75 | ► |      |      |      |      |      |      |      | 20,9 | 22   | 25   |      |      |      |     |      |      |     |     |     |     | m |
| ▲▲▲▲ |      |   | 8    |      |      |      |      |      |      | 7,6  | 6,5  |      |      |      |      |     |      |      |     |     |     | t   |   |



|      |     |   |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |      |      |   |
|------|-----|---|------|------|------|------|------|------|------|------|-----|------|------|------|------|------|------|------|------|------|------|------|---|
| 60 m | 2,1 | ► | 14,5 | 15   | 17   | 20   | 22   | 26   | 26,5 | 30   | 32  | 35   | 37   | 40   | 42   | 45   | 47   | 50   | 52   | 55   | 57   | 60   | m |
| ▲▲▲▲ |     |   | 8    | 7,7  | 6,7  | 5,5  | 4,9  | 4    | 4    | 3,4  | 3,2 | 2,85 | 2,65 | 2,4  | 2,25 | 2,05 | 1,9  | 1,75 | 1,65 | 1,55 | 1,45 | 1,35 | t |
| 55 m | 2,1 | ► |      | 15,8 | 17   | 20   | 22   | 25   | 28,4 | 29   | 32  | 35   | 37   | 40   | 42   | 45   | 47   | 50   | 52   | 55   |      |      | m |
| ▲▲▲▲ |     |   | 8    | 7,4  | 6,1  | 5,5  | 4,7  | 4    | 4    | 3,5  | 3,2 | 2,95 | 2,7  | 2,5  | 2,3  | 2,15 | 2    | 1,9  | 1,75 |      |      | t    |   |
| 50 m | 2,1 | ► |      |      | 18,9 | 20   | 22   | 25   | 27   | 30   | 32  | 34,1 | 34,8 | 37   | 40   | 42   | 45   | 47   | 50   |      |      | m    |   |
| ▲▲▲▲ |     |   | 8    |      | 7,5  | 6,7  | 5,8  | 5,3  | 4,7  | 4,3  | 4   | 3,7  | 3,4  | 3,2  | 2,9  | 2,75 | 2,55 |      |      |      |      | t    |   |
| 45 m | 2,1 | ► |      |      |      | 21,1 | 22   | 25   | 27   | 30   | 32  | 35   | 38,2 | 38,9 | 40   | 42   | 45   |      |      |      |      | m    |   |
| ▲▲▲▲ |     |   | 8    |      |      | 7,6  | 6,6  | 6    | 5,3  | 4,9  | 4,4 | 4    | 3,9  | 3,6  | 3,35 |      |      |      |      |      | t    |      |   |
| 40 m | 2,1 | ► |      |      |      |      | 21,3 | 22   | 25   | 27   | 30  | 32   | 35   | 38,4 | 39,2 | 40   |      |      |      |      |      | m    |   |
| ▲▲▲▲ |     |   | 8    |      |      |      | 7,7  | 6,6  | 6,1  | 5,4  | 5   | 4,5  | 4    | 3,9  |      |      |      |      |      |      | t    |      |   |
| 35 m | 2,1 | ► |      |      |      |      |      | 21,3 | 22   | 25   | 27  | 30   | 32   | 35   |      |      |      |      |      |      |      | m    |   |
| ▲▲▲▲ |     |   | 8    |      |      |      |      | 7,7  | 6,7  | 6,1  | 5,4 | 5    | 4,5  |      |      |      |      |      |      |      | t    |      |   |
| 30 m | 2,1 | ► |      |      |      |      |      |      | 21,3 | 22   | 25  | 27   | 30   |      |      |      |      |      |      |      |      | m    |   |
| ▲▲▲▲ |     |   | 8    |      |      |      |      |      | 7,7  | 6,7  | 6,1 | 5,4  |      |      |      |      |      |      |      |      | t    |      |   |
| 25 m | 2,1 | ► |      |      |      |      |      |      |      | 21,4 | 22  | 25   |      |      |      |      |      |      |      |      |      | m    |   |
| ▲▲▲▲ |     |   | 8    |      |      |      |      |      |      | 7,8  | 6,7 |      |      |      |      |      |      |      |      |      | t    |      |   |



Lest de base / Grundballast / Base ballast / Lastre de base / Zavorra di base  
 Lastro da base / Базовый Балласт

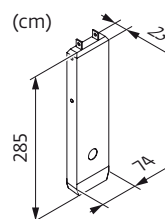
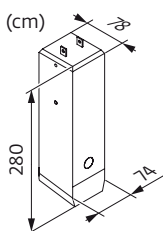
|                                                                                                    |                                                                                                     |       |      |      |      |      |      |      |      |      |      |      |      |      |  |
|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|------|--|
| <br>1,6 m<br>City | <b>ZC 4230</b><br> | H (m) | 41,2 | 31,2 | 21,2 |      |      |      |      |      |      |      |      |      |  |
|                                                                                                    |                    | (t)   | 80   | 75   | 70   |      |      |      |      |      |      |      |      |      |  |
| <br>1,6 m         | <b>ZD 4230</b><br> | H (m) | 46,2 | 41,2 | 31,2 | 21,2 |      |      |      |      |      |      |      |      |  |
|                                                                                                    |                    | (t)   | 70   | 65   | 60   | 55   |      |      |      |      |      |      |      |      |  |
| <br>1,6 m         | <b>S 41A</b><br>   | H (m) | 55,8 | 50,8 | 45,8 | 40,8 | 35,8 | 30,8 | 25,8 | 20,8 | 15,8 |      |      |      |  |
|                                                                                                    |                    | (t)   | 114  | 90   | 66   | 60   | 54   | 48   | 48   | 48   | 48   |      |      |      |  |
| <br>2 m           | <b>ZD 463</b><br>  | H (m) | 54,8 | 51,5 | 48,1 | 43,1 | 38,1 | 33,1 | 28,1 | 23,1 | 18,1 | 13,1 |      |      |  |
|                                                                                                    |                    | (t)   | 110* | 90   | 70   | 60   | 55   | 55   | 55   | 55   | 55   | 55   |      |      |  |
| <br>2 m           | <b>V 60A</b><br>   | H (m) | 67   | 62   | 57   | 52   | 47   | 42   | 37   | 32   | 27   | 22   | 17   |      |  |
|                                                                                                    |                    | (t)   | 132  | 108  | 84   | 72   | 48   | 24   | 24   | 24   | 24   | 24   | 24   |      |  |
| <br>2 m           | <b>V 63A</b><br>   | H (m) | 73,8 | 70,5 | 67,2 | 62,2 | 57,2 | 52,2 | 47,2 | 42,2 | 37,2 | 32,2 | 27,2 | 22,2 |  |
|                                                                                                    |                    | (t)   | 180  | 168  | 144  | 120  | 84   | 72   | 48   | 24   | 24   | 24   | 24   | 24   |  |
| <br>2 m           | <b>ZD 463</b><br>  | H (m) | 53,1 | 48,1 | 43,1 | 38,1 | 33,1 | 28,1 | 23,1 | 18,1 | 13,1 |      |      |      |  |
|                                                                                                    |                   | (t)   | 120* | 85   | 55   | 50   | 50   | 50   | 50   | 50   | 50   |      |      |      |  |

Poids de flèche & lest de contre-flèche / Auslegergewicht & Gegenauslegerballast / Jib weight & counter-jib ballast / Peso de flecha y lastre de contra-flecha / Peso del braccio & zavorra di contro-braccio / Peso da lança & lastro da contra lança  
 Вес стрелы и балласт контр-стрелы

|                                                                                     |  (kg) - 33 LVF<br>(+/- 5%) |                                                                                     |                                                                                     |  |         |                                                                                           |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------|-------------------------------------------------------------------------------------------|
|  |                            |  |  | 3600 kg                                                                             | 1100 kg |  (kg) |
| 60 m                                                                                | 8930                                                                                                          | 8750                                                                                | 9090                                                                                | 3                                                                                   | 4       | 15200                                                                                     |
| 55 m                                                                                | 8735                                                                                                          | 8555                                                                                | 8895                                                                                | 3                                                                                   | 4       | 15200                                                                                     |
| 50 m                                                                                | 8505                                                                                                          | 8325                                                                                | 8665                                                                                | 3                                                                                   | 3       | 14100                                                                                     |
| 45 m                                                                                | 8210                                                                                                          | 8030                                                                                | 8370                                                                                | 3                                                                                   | 3       | 14100                                                                                     |
| 40 m                                                                                | 7870                                                                                                          | 7690                                                                                | 8030                                                                                | 3                                                                                   | 2       | 13000                                                                                     |
| 35 m                                                                                | 7500                                                                                                          | 7320                                                                                | 7660                                                                                | 3                                                                                   | 1       | 11900                                                                                     |
| 30 m                                                                                | 7135                                                                                                          | 6960                                                                                | 7290                                                                                | 3                                                                                   | 0       | 10800                                                                                     |
| 25 m                                                                                | 6765                                                                                                          | 6585                                                                                | 6925                                                                                | 2                                                                                   | 3       | 10500                                                                                     |

CAU - 3600 kg

CAV - 1100 kg

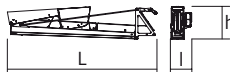
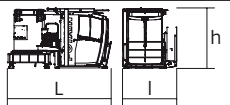
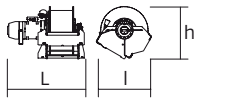
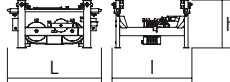
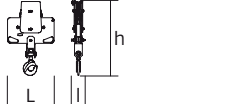
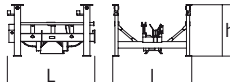
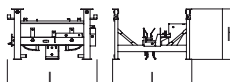
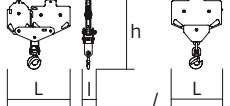


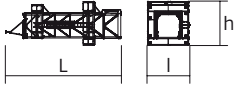
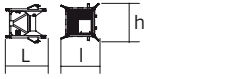
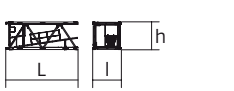
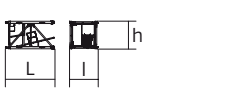
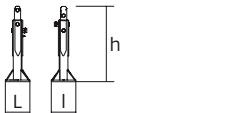
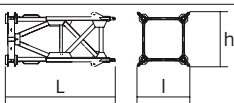
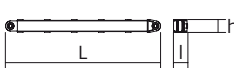
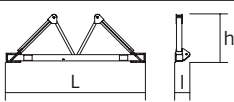
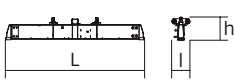
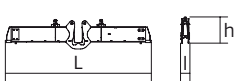
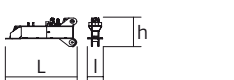
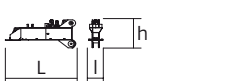
Encombrenment et poids / Abmessungen und Gewicht / Dimensions and weight / Dimensiones y peso / Ingombro e peso  
dimensões e pesos / габаритные размеры и вес

Partie tournante / Drehender Kranteil / Slewing crane part / Parte giratoria

Parte rotante / Parte rotativa / Поворотная часть :  60 m -  33 LVF



| Partie tournante / Drehender Kranteil / Slewing crane part<br>Parte giratoria / Parte rotante / Parte rotativa<br>Поворотная часть                                                                             |                                                                                     |                                                                                                                                                                                              | L (m)                               | I (m)                                | h (m)                               | kg<br>(+/- 5%)                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|--------------------------------------|-------------------------------------|---------------------------------|
| Contre-flèche / Gegenausleger<br>Counter-jib / Contra-flecha<br>Controbraccio / Contra-lança<br>Контр-стрела                                                                                                   |    | Ⓐ<br>Ⓑ                                                                                                                                                                                       | 11,86<br>11,86                      | 1,62<br>1,62                         | 2,49<br>2,49                        | 5145<br>4960                    |
| Pivot + cabine / Krankopf + Kabine<br>Towerhead + cab / Pivote + cabina<br>Portaralla + cabina / Pivot + cabina<br>Секция поворотной части + кабина                                                            |    | Ultra<br>View                                                                                                                                                                                | 4,32                                | 2,25                                 | 2,47                                | 5590                            |
| Elément de flèche / Auslegerelement<br>Jib section / Elemento de flecha<br>Elemento di braccio / Elemento de lança<br>Секция стрелы                                                                            |    | ①<br>33 LVF<br>7 DVF                                                                                                                                                                         | 11,04                               | 2,93                                 | 2,61                                | 3800                            |
| Elément de flèche / Auslegerelement<br>Jib section / Elemento de flecha<br>Elemento di braccio / Elemento de lança<br>Секция стрелы                                                                            |   | ③<br>④<br>⑥<br>⑦<br>⑨                                                                                                                                                                        | 5,2<br>5,19<br>5,18<br>5,16<br>5,17 | 1,05<br>1,05<br>1,05<br>1,05<br>1,05 | 2,33<br>2,33<br>1,9<br>1,89<br>1,17 | 600<br>605<br>390<br>355<br>240 |
| Elément de flèche / Auslegerelement<br>Jib section / Elemento de flecha<br>Elemento di braccio / Elemento de lança<br>Секция стрелы                                                                            |  | ②                                                                                                                                                                                            | 10,23                               | 1,05                                 | 2,36                                | 1455                            |
| Elément de flèche / Auslegerelement<br>Jib section / Elemento de flecha<br>Elemento di braccio / Elemento de lança<br>Секция стрелы                                                                            |  | ⑤<br>⑧                                                                                                                                                                                       | 5,18<br>5,17                        | 1,05<br>1,05                         | 2,32<br>1,88                        | 480<br>300                      |
| Elément de flèche / Auslegerelement<br>Jib section / Elemento de flecha<br>Elemento di braccio / Elemento de lança<br>Секция стрелы                                                                            |  | ⑩                                                                                                                                                                                            | 5,1                                 | 1,05                                 | 1,17                                | 200                             |
| Treuil de levage (+ câble) / Hubwerk (+ Seil)<br>Hoisting winch (+ rope) / Mecanismo de elevación (+ cabo)<br>Argano di sollevamento (+ fune)<br>Guincho de elevação (+ cabo)<br>Подъемная лебедка (+ канатом) |  | 33 LVF<br>50 LVF<br>50 LVF GH                                                                                                                                                                | 1,4<br>1,5<br>1,59                  | 0,82<br>0,96<br>1,35                 | 0,75<br>0,92<br>1,26                | 905<br>1200<br>2020             |
| Chariot / Laufkatze<br>Trolley / Carrello<br>Carro / Carro-distribuidor<br>Тележка                                                                                                                             |  | <br>8 t                                                                                                 | 1,58                                | 1,33                                 | 0,87                                | 280                             |
| Moufle / Hubflasche<br>Pulley block / Aparejo<br>Bozzello / Cadernal<br>Полиспаст                                                                                                                              |  | <br>8 t                                                                                                 | 0,9                                 | 0,23                                 | 1,41                                | 280                             |
| Chariot / Laufkatze<br>Trolley / Carrello<br>Carro / Carro-distribuidor<br>Тележка                                                                                                                             |  | <br>8 t                                                                                                 | 1,39                                | 1,26                                 | 0,95                                | 280                             |
| Chariot / Laufkatze<br>Trolley / Carrello<br>Carro / Carro-distribuidor<br>Тележка                                                                                                                             |  | <br>8 t<br><br>4 t | 1,42<br>1,51                        | 1,26<br>1,3                          | 0,95<br>0,95                        | 280<br>235                      |
| Moufle / Hubflasche<br>Pulley block / Aparejo<br>Bozzello / Cadernal<br>Полиспаст                                                                                                                              |  | <br>8 t<br><br>4 t | 1,26<br>0,79                        | 0,27<br>0,17                         | 1,53<br>1,36                        | 250<br>130                      |

| Рулоне / Kranturm / Crane tower<br>Mástil / Torre / Torre<br>Башня крана                                                                                        |                                                                                     |                                                                  | L (m)                        | I (m)                       | h (m)                        | kg<br>(+/- 5%)               |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------------------------------------------------|------------------------------|-----------------------------|------------------------------|------------------------------|
| Cage de télescopage / Teleskopwagen<br>Telescopic cage / Jaula de telescopaje<br>Gabbia di telescopaggio / Gaiola de telescopagem<br>для телескопирования крана |    | $\nabla$ 1,6 m<br>$\nabla$ 2 m                                   | 11,2<br>11,5                 | 3,94<br>4,21                | 3,58<br>4,36                 | 5865<br>8235                 |
| K40/K40<br>K60/K40                                                                                                                                              |    | $\nabla$ 1,6 m<br>$\nabla$ 2/1,6 m                               | 2,21<br>2,21                 | 2,1<br>2,51                 | 2,06<br>2,47                 | 1455<br>2610                 |
| K 437B<br>KM 437E<br>K 639B                                                                                                                                     |    | $\nabla$ 1,6 m<br>$\nabla$ 1,6 m<br>$\nabla$ 2 m                 | 10,21<br>10,21<br>10,23      | 1,67<br>1,62<br>2,07        | 1,62<br>1,62<br>2,03         | 3450<br>3215<br>5290         |
| K 437A<br>K 439A<br>KR 649A<br>K 639A                                                                                                                           |    | $\nabla$ 1,6 m<br>$\nabla$ 1,6 m<br>$\nabla$ 2 m<br>$\nabla$ 2 m | 5,21<br>5,21<br>5,23<br>5,23 | 1,67<br>1,67<br>2,1<br>2,07 | 1,62<br>1,62<br>2,08<br>2,03 | 1850<br>2230<br>3250<br>2805 |
| K 437C<br>K 639C                                                                                                                                                |    | $\nabla$ 1,6 m<br>$\nabla$ 2 m                                   | 3,45<br>3,57                 | 1,67<br>2,07                | 1,62<br>2,03                 | 1360<br>1985                 |
| Pieds de scellement / Verankerungsfüße<br>Fixing angles / Pie de empotramiento<br>Montante da annegare / Angulos fixadores<br>анкера                            |   | P 41A<br>P 62B                                                   | 0,37<br>0,65                 | 0,37<br>0,65                | 1,14<br>1,27                 | 135<br>295                   |
| Mât-châssis / Grundmasteinheit<br>Basic mast unit / Tramo-chasis<br>Elemento base / Tramo-chassis<br>Мачта для крепления к шасси                                |  | S 41A<br>V 60A<br>V 63A                                          | 3,63<br>5,01<br>10,02        | 1,96<br>2,41<br>2,41        | 2,08<br>2,41<br>2,41         | 2965<br>4390<br>7485         |
| Haubans / Mastabstützungen<br>Struts / Tornapuntas<br>Puntoni / Escoras<br>Растяжка                                                                             |  | S 41A<br>V 60A<br>V 63A                                          | 3,18<br>4,51<br>4,51         | 0,26<br>0,29<br>0,33        | 0,24<br>0,29<br>0,33         | 225<br>420<br>515            |
| Sommier / Unterwagenhälfte<br>Half-bearer / Testero<br>Testata / Estrutura base<br>Траверса                                                                     |  | S 41A<br>V 60A<br>V 63A                                          | 5,08<br>6,7<br>6,7           | 0,6<br>0,7<br>0,7           | 1,78<br>2,31<br>2,31         | 1145<br>1600<br>1850         |
| Bras de croix / Fundamentkreuzträger<br>Cross girder / Brazo en cruz<br>Braccio croce / Braço da cruz<br>Поперечная балка                                       |  | ZC 4230<br>ZD 4230                                               | 5,64<br>6,63                 | 0,82<br>0,82                | 1,05<br>1,05                 | 1590<br>1830                 |
| Bras de croix / Fundamentkreuzträger<br>Cross girder / Brazo en cruz<br>Braccio croce / Braço da cruz<br>Поперечная балка                                       |  | ZC 4230<br>ZD 4230                                               | 5,64<br>6,63                 | 0,47<br>0,47                | 1,33<br>1,34                 | 1895<br>2135                 |
| Bras de croix / Fundamentkreuzträger<br>Cross girder / Brazo en cruz<br>Braccio croce / Braço da cruz<br>Поперечная балка                                       |  | ZD 463                                                           | 7,65                         | 1,17                        | 1,36                         | 3585                         |
| 1/2 Bras de croix / 1/2 Fundamentkreuzträger<br>1/2 Cross girder / 1/2 Brazo en cruz<br>1/2 Braccio croce / 1/2 Braço da cruz<br>1/2 Поперечная балка           |  | ZD 463                                                           | 3,41                         | 0,7                         | 1,35                         | 1655                         |
| 1/2 Bras de croix / 1/2 Fundamentkreuzträger<br>1/2 Cross girder / 1/2 Brazo en cruz<br>1/2 Braccio croce / 1/2 Braço da cruz<br>1/2 Поперечная балка           |  | ZD 463                                                           | 3,41                         | 0,73                        | 1,35                         | 1670                         |

Mécanismes / Triebwerke / Mechanisms / Mecanismos / Meccanismi  
Mecanismos / Механизмы

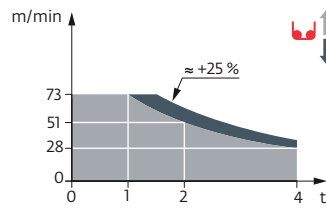
| 400 V - 50 Hz                                                                       |                                                                                   |                        |  |           |    |     |  |      |      |      | ch - PS<br>hp | kW      |  |  |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------|-----------------------------------------------------------------------------------|-----------|----|-----|------------------------------------------------------------------------------------|------|------|------|---------------|---------|-------------------------------------------------------------------------------------|--|
|    | 33 LVF 20 Optima                                                                  | m/min                  | 28                                                                                | 36        | 51 | 73  | 14                                                                                 | 18   | 25,5 | 36,5 | 33            | 22      | 290 m                                                                               |  |
|                                                                                     | 50 LVF 20 Optima                                                                  | m/min                  | 46                                                                                | 59        | 84 | 121 | 23                                                                                 | 29,5 | 42   | 60,5 | 50            | 37      | 363 m                                                                               |  |
|                                                                                     |                                                                                   | t                      | 4                                                                                 | 3         | 2  | 1   | 8                                                                                  | 6    | 4    | 2    |               |         |                                                                                     |  |
|                                                                                     | 50 LVF 20 GH Optima                                                               | m/min                  | 43                                                                                | 55        | 79 | 113 | 21,5                                                                               | 27,5 | 39,5 | 56,5 | 50            | 37      | 634 m                                                                               |  |
|                                                                                     |                                                                                   | t                      | 4                                                                                 | 3         | 2  | 1   | 8                                                                                  | 6    | 4    | 2    |               |         |                                                                                     |  |
|                                                                                     |  | 7 DVF 4                | m/min                                                                             | 0 → 79    |    |     |                                                                                    |      |      |      |               | 6,5     | 4,8                                                                                 |  |
|    | RVF 152 Optima+                                                                   | tr/min<br>U/min<br>rpm | 0 → 0,8                                                                           |           |    |     |                                                                                    |      |      |      | 2 x 5,5       | 2 x 4   |                                                                                     |  |
|    | S 41A<br>RT 443<br>A1 - 2V<br>R ≥ 10 m                                            | m/min                  | 15 - 30                                                                           |           |    |     |                                                                                    |      |      |      | 4 x 5         | 4 x 3,7 |                                                                                     |  |
|    | V 60A<br>RT 544<br>A1 - 2V<br>R ≥ 13 m                                            | m/min                  | 13,5 - 27                                                                         |           |    |     |                                                                                    |      |      |      | 4 x 7         | 4 x 5,2 |                                                                                     |  |
|    | V 63A<br>RT 664<br>A2B - 2V                                                       | m/min                  | 16 - 32                                                                           |           |    |     |                                                                                    |      |      |      | 6 x 7         | 6 x 5,2 |                                                                                     |  |
|    |                                                                                   |                        |                                                                                   |           |    |     |                                                                                    |      |      |      |               |         |                                                                                     |  |
|    | ZC 4230<br>ZD 4230                                                                | RT 324                 | m/min                                                                             | 12,5 - 25 |    |     |                                                                                    |      |      |      |               | 2 x 7   | 2 x 5,2                                                                             |  |
|  | ZD 463<br>RT 443<br>A1 - 2V                                                       | m/min                  | 15 - 30                                                                           |           |    |     |                                                                                    |      |      |      | 4 x 5         | 4 x 3,7 |                                                                                     |  |

|                                                                                     |              |                                                                                                                                           |     |
|-------------------------------------------------------------------------------------|--------------|-------------------------------------------------------------------------------------------------------------------------------------------|-----|
|  | IEC 60204-32 |                                                      | kVA |
| 400 V (+10% -10%) 50 Hz                                                             |              | 33 LVF : 40 → 27 kVA <br>50 LVF / 50 LVF GH : 54 kVA |     |

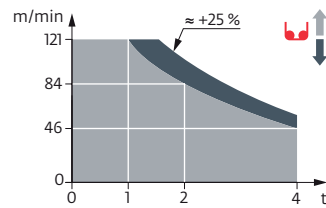
| 480 V - 60 Hz                                                                       |                                                                                     |                        |  |         |    |     |  |      |      |      | ch - PS<br>hp | kW      |  |  |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|-------------------------------------------------------------------------------------|---------|----|-----|--------------------------------------------------------------------------------------|------|------|------|---------------|---------|---------------------------------------------------------------------------------------|--|
|  | 33 LVF 20 Optima                                                                    | m/min                  | 28                                                                                  | 36      | 51 | 73  | 14                                                                                   | 18   | 25,5 | 36,5 | 33            | 22      | 290 m                                                                                 |  |
|                                                                                     | 50 LVF 20 Optima                                                                    | m/min                  | 46                                                                                  | 59      | 84 | 121 | 23                                                                                   | 29,5 | 42   | 60,5 | 50            | 37      | 363 m                                                                                 |  |
|                                                                                     |                                                                                     | t                      | 4                                                                                   | 3       | 2  | 1   | 8                                                                                    | 6    | 4    | 2    |               |         |                                                                                       |  |
|                                                                                     | 50 LVF 20 GH Optima                                                                 | m/min                  | 43                                                                                  | 55      | 79 | 113 | 21,5                                                                                 | 27,5 | 39,5 | 56,5 | 50            | 37      | 634 m                                                                                 |  |
|                                                                                     |                                                                                     | t                      | 4                                                                                   | 3       | 2  | 1   | 8                                                                                    | 6    | 4    | 2    |               |         |                                                                                       |  |
|                                                                                     |  | 7 DVF 4                | m/min                                                                               | 0 → 79  |    |     |                                                                                      |      |      |      |               | 6,5     | 4,8                                                                                   |  |
|  | RVF 152 Optima+                                                                     | tr/min<br>U/min<br>rpm | 0 → 0,8                                                                             |         |    |     |                                                                                      |      |      |      | 2 x 5,5       | 2 x 4   |                                                                                       |  |
|  | S 41A<br>RT 443<br>A1 - 2V<br>R ≥ 10 m                                              | m/min                  | 18 - 36                                                                             |         |    |     |                                                                                      |      |      |      | 4 x 6         | 4 x 4,4 |                                                                                       |  |
|  | V 60A<br>RT 544<br>A1 - 2V<br>R ≥ 13 m                                              | m/min                  | 16 - 32                                                                             |         |    |     |                                                                                      |      |      |      | 4 x 8,4       | 4 x 6,2 |                                                                                       |  |
|  | V 63A<br>RT 664<br>A2B - 2V                                                         | m/min                  | 19 - 38                                                                             |         |    |     |                                                                                      |      |      |      | 6 x 8,4       | 6 x 6,2 |                                                                                       |  |
|  |                                                                                     |                        |                                                                                     |         |    |     |                                                                                      |      |      |      |               |         |                                                                                       |  |
|  | ZC 4230<br>ZD 4230                                                                  | RT 324                 | m/min                                                                               | 15 - 30 |    |     |                                                                                      |      |      |      |               | 2 x 8,4 | 2 x 6,2                                                                               |  |
|  | ZD 463                                                                              | RT 443<br>A1 - 2V      | m/min                                                                               | 18 - 36 |    |     |                                                                                      |      |      |      |               | 4 x 6   | 4 x 4,4                                                                               |  |

|                                                                                     |              |                                                                                                                                           |     |
|-------------------------------------------------------------------------------------|--------------|-------------------------------------------------------------------------------------------------------------------------------------------|-----|
|  | IEC 60204-32 |                                                      | kVA |
| 480 V (+6% -10%) 60 Hz                                                              |              | 33 LVF : 40 → 27 kVA <br>50 LVF / 50 LVF GH : 54 kVA |     |

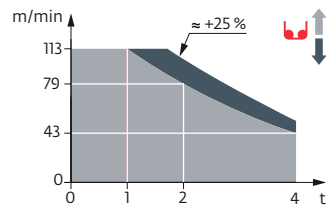
## 33 LVF 20 Optima



## 50 LVF 20 Optima



## 50 LVF 20 GH Optima



| FR                                                                                                           | DE                                                                                                     | EN                                                                                                                              | ES                                                                                                      | IT                                                                                                                | PT                                                                                                                      | RU                                                                                                                                    |
|--------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                              |                                                                                                        |                                                                                                                                 |                                                                                                         |                                                                                                                   |                                                                                                                         |                                                                                                                                       |
| Appel de flèche                                                                                              | Auslegerüberhöhung                                                                                     | Jib elevation                                                                                                                   | Elevación de la flecha                                                                                  | Inclinazione braccio                                                                                              | Desvio da lança                                                                                                         | подъем стрелы                                                                                                                         |
| Équipements standards                                                                                        | Standardausrüstungen                                                                                   | Standard equipment                                                                                                              | Equipamiento de serie                                                                                   | Equipaggiamento standard                                                                                          | Equipamento de série                                                                                                    | Стандартное оборудование                                                                                                              |
| Équipements optionnels                                                                                       | Sonderausrüstungen                                                                                     | Options                                                                                                                         | Equipamiento opcional                                                                                   | Equipaggiamento in opzione                                                                                        | Equipamento opcional                                                                                                    | Дополнительное оборудование (опция)                                                                                                   |
| • Réactions en service                                                                                       | Reaktionskräfte in Betrieb                                                                             | Reactions in service                                                                                                            | Reacciones en servicio                                                                                  | Reazioni in servizio                                                                                              | Reacções em serviço                                                                                                     | Реакция при работе                                                                                                                    |
| • Réactions hors service                                                                                     | Reaktionskräfte außer Betrieb                                                                          | Reactions out of service                                                                                                        | Reacciones fuera de servicio                                                                            | Reazioni fuori servizio                                                                                           | Reacções fora de serviço                                                                                                | Реакция в покое                                                                                                                       |
| • Poids à vide sans lest avec flèche et hauteur maximum                                                      | Gewicht ohne Last, ohne Ballast, mit Ausleger und max. Höhe                                            | Weight without load, without ballast, with jib and max. height                                                                  | Peso en vacío sin lastre, con flecha y altura máxima                                                    | Peso a vuoto, senza zavorra, con braccio e altezza massimi.                                                       | Peso em vazio sem lastro com lança e altura máxima.                                                                     | Вес пустого, без балласта, со стрелой, максимальной высоты.                                                                           |
| • Poids de flèche                                                                                            | Auslegergewicht                                                                                        | Jib weight                                                                                                                      | Peso de flecha                                                                                          | Peso del braccio                                                                                                  | Peso da lança                                                                                                           | вес стрелы                                                                                                                            |
| • Poids total du lest                                                                                        | Ballast-Gesamtgewicht                                                                                  | Total ballast weight                                                                                                            | Peso total del lastre                                                                                   | Peso totale della zavorra                                                                                         | Peso total do lastro                                                                                                    | Общий вес балласта                                                                                                                    |
| • Utilisation poste fixe uniquement                                                                          | Nur stationärer Einsatz                                                                                | Only static use                                                                                                                 | Uso sobre puesto fijo únicamente                                                                        | Utilizzo esclusivamente in postazione fissa                                                                       | Unicamente para utilização fixa                                                                                         | Использовать только в неподвижном состоянии                                                                                           |
| • Camion 13,4 m                                                                                              | Lkw 13,4 m                                                                                             | Lorry 13,4 m                                                                                                                    | Camión 13,4 m                                                                                           | Camion 13,4 m                                                                                                     | Camião 13,4 m                                                                                                           | Резусовой автомобиль 13,4 м                                                                                                           |
| • Conteneur High Cube 40', et/ou Flat Rack 20'                                                               | Container High Cube 40', und/oder Flat Rack 20'                                                        | Container High Cube 40', and/or Flat Rack 20'                                                                                   | Contenedor High Cube 40', y/o Flat Rack 20'                                                             | Container High Cube 40', e/o Flat Rack 20'                                                                        | Contentor High Cube 40', e/ou Flat Rack 20'                                                                             | 40-футовый контейнер повышенной вместимости High Cube, и/или 20-футовая открытая платформа Flat Rack                                  |
| • Cadre d'ancrage serré                                                                                      | Fester Verankerungsrahmen                                                                              | Tightened anchorage frame                                                                                                       | Marco de anclaje de apriete                                                                             | Quadro di ancoraggio stretto                                                                                      | Quadro de amarração apertado                                                                                            | Прикрепленная анкерная рама                                                                                                           |
| • Cadre d'ancrage desserré                                                                                   | Losser Verankerungsrahmen                                                                              | Loosened anchorage frame                                                                                                        | Marco de anclaje de desapriete                                                                          | Quadro di ancoraggio allentato                                                                                    | Quadro de amarração solto                                                                                               | Отсоединенная анкерная рама                                                                                                           |
| • Levage                                                                                                     | Heben                                                                                                  | Hoisting                                                                                                                        | Elevación                                                                                               | Sollevamento                                                                                                      | Elevação                                                                                                                | Подъем                                                                                                                                |
| • Distribution                                                                                               | Katzfahren                                                                                             | Trolleying                                                                                                                      | Distribución                                                                                            | Distribuzione                                                                                                     | Distribuição                                                                                                            | Перемещение по стреле                                                                                                                 |
| • Orientation                                                                                                | Schwenken                                                                                              | Slewing                                                                                                                         | Orientación                                                                                             | Rotazione                                                                                                         | Rotação                                                                                                                 | Поворот                                                                                                                               |
| • Translation                                                                                                | Kranfahren                                                                                             | Travelling                                                                                                                      | Traslación                                                                                              | Traslazione                                                                                                       | Traslacção                                                                                                              | Перемещение крана                                                                                                                     |
| • kVA Puissance requise                                                                                      | Erforderliche Leistung                                                                                 | Required power                                                                                                                  | Potencia Necesaria                                                                                      | Potenza richiesta                                                                                                 | Potência Necessária                                                                                                     | Потребляемая мощность                                                                                                                 |
| • Fonction Power Control : vitesses treuils adaptées à la puissance disponible                               | Funktion Power Control: Geschwindigkeiten der Triebwerke werden an die verfügbare Leistung angepasst   | Power Control Function: winch speeds adapted to the available power                                                             | Función Power Control: marchas de los cabrestantes adaptadas a la potencia disponible                   | Funzione Power Control: velocità degli argani adattate alla potenza disponibile                                   | Função Power Control: velocidades de guincho adaptadas à potência disponível                                            | Функция контроля мощности Power Control: регулировка скорости лебедок в зависимости от доступной мощности                             |
| • Nous consulter                                                                                             | Auf Anfrage                                                                                            | Consult us                                                                                                                      | Consultarnos                                                                                            | Consultateci                                                                                                      | Consultar-nos                                                                                                           | Проконсультируйтесь у нас                                                                                                             |
|                                                                                                              |                                                                                                        |                                                                                                                                 |                                                                                                         |                                                                                                                   |                                                                                                                         |                                                                                                                                       |
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