

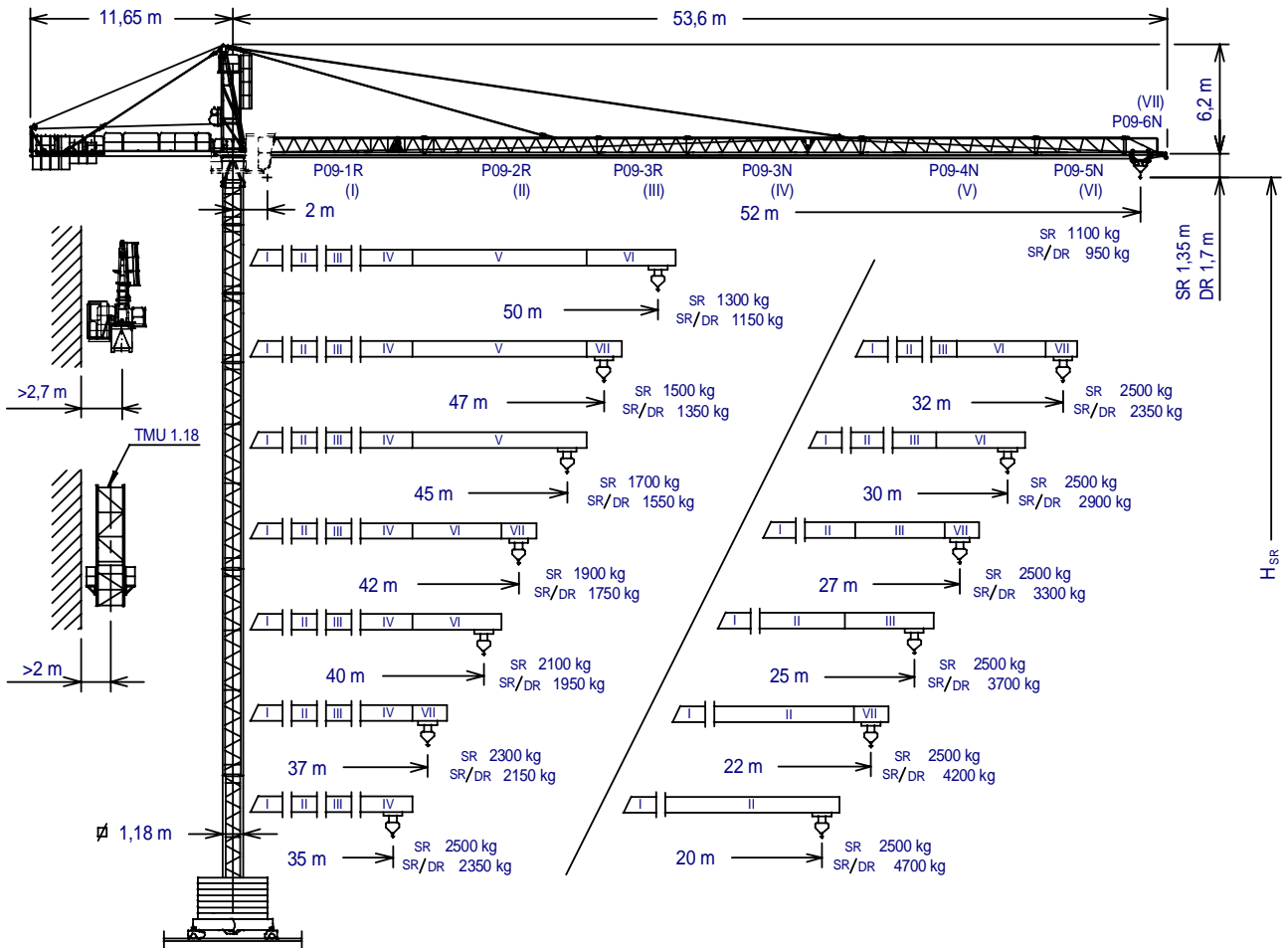
GRUA TORRE TOWER CRANE

J52NS

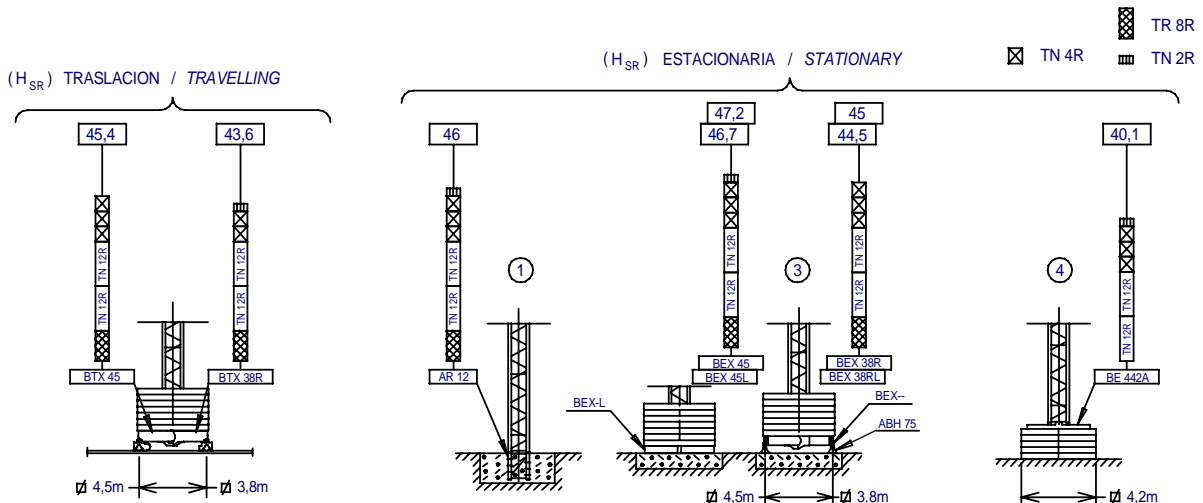


EN 14439
C25

SISTEMA DE CALIDAD CERTIFICADO SEGUN
QUALITY ASSURANCE SYSTEM CERTIFIED ACCORDING TO
UNE-EN-ISO 9001



| | | | | |
|---|--------------|------------|-------------------------|------------|
| $H_{DR} = H_{SR} - 0,35$ | P09-1R | 152.40.500 | BTX 45 / BEX 45 | 137.20.500 |
| $H_{SR} =$ Altura máxima bajo gancho sin arristrar (m). Maximum height under hook without fastening (m). Con cabina bajar H_{SR} 2m. Lower H_{SR} 2m with cabin. | P09-2R | 152.41.000 | BTX 38R / BEX 38R | 137.20.000 |
| | P09-3R | 152.42.000 | ABH 75 | 152.23.000 |
| | P09-3N | 149.42.000 | AR 12 | 137.21.000 |
| | P09-4N | 149.43.000 | BE 442A | 138.24.000 |
| | P09-5N | 149.44.000 | TMU 1.18 | 202.35.500 |
| | P09-6N | 149.45.000 | TN 2R | 152.32.000 |



Viento fuera de servicio / Out of service wind: FEM 1005 – C25



JASO EQUIPOS DE OBRAS Y CONSTRUCCIONES, S.L.

Fecha / Date: 12-03-2010 - Reservado el derecho a modificaciones sin previo aviso / Subject to modification, without previous warning
Declinamos toda responsabilidad derivada de la información proporcionada / This information is supplied without liability

| SR (kg) | | Cargas máximas SR1 — 2 t Maximum loads SR2 — 2,5 t | | | | | | | | | | | | | | 2-2,5 t a |
|------------|---------------------------------------|---|------|------|------|------|------|------|------|------|------|-----|-----|-----|-------------|--------------|
| PLUMA B | Alcance del gancho (m) Hook reach (m) | | | | | | | | | | | | | | | |
| | 52 | 50 | 47 | 45 | 42 | 40 | 37 | 35 | 32 | 30 | 27 | 25 | 22 | 20 | | |
| 52 m | 1,1 | 1,15 | 1,24 | 1,31 | 1,42 | 1,5 | 1,64 | 1,75 | 1,94 | 2,08 | 2,34 | 2,5 | 2,5 | 2,5 | 31,1-25,4 m | |
| 50 m | — | 1,3 | 1,4 | 1,47 | 1,59 | 1,68 | 1,84 | 1,96 | 2,16 | 2,32 | 2,5 | 2,5 | 2,5 | 2,5 | 34,4-28,1 m | |
| 47 m | — | — | 1,5 | 1,57 | 1,71 | 1,81 | 1,97 | 2,09 | 2,31 | 2,48 | 2,5 | 2,5 | 2,5 | 2,5 | 36,5-29,8 m | |
| 45 m | — | — | — | 1,7 | 1,84 | 1,94 | 2,12 | 2,25 | 2,49 | 2,5 | 2,5 | 2,5 | 2,5 | 2,5 | 38,9-31,8 m | |
| 42 m | — | — | — | — | 1,9 | 2,01 | 2,19 | 2,33 | 2,5 | 2,5 | 2,5 | 2,5 | 2,5 | 2,5 | 40,1-32,8 m | |
| 40 m | — | — | — | — | — | 2,1 | 2,29 | 2,43 | 2,5 | 2,5 | 2,5 | 2,5 | 2,5 | 2,5 | 40-34,2 m | |
| 37 m | — | — | — | — | — | — | 2,3 | 2,44 | 2,5 | 2,5 | 2,5 | 2,5 | 2,5 | 2,5 | 37-34,3 m | |
| 35 m | — | — | — | — | — | — | — | 2,5 | 2,5 | 2,5 | 2,5 | 2,5 | 2,5 | 2,5 | 35 m | |
| 32 m | — | — | — | — | — | — | — | — | 2,5 | 2,5 | 2,5 | 2,5 | 2,5 | 2,5 | 32 m | |
| 30 m | — | — | — | — | — | — | — | — | — | 2,5 | 2,5 | 2,5 | 2,5 | 2,5 | 30 m | |
| 27 m | — | — | — | — | — | — | — | — | — | — | 2,5 | 2,5 | 2,5 | 2,5 | 27 m | |
| 25 m | — | — | — | — | — | — | — | — | — | — | — | 2,5 | 2,5 | 2,5 | 25 m | |
| 22 m | — | — | — | — | — | — | — | — | — | — | — | — | 2,5 | 2,5 | 22 m | |
| 20 m | — | — | — | — | — | — | — | — | — | — | — | — | — | 2,5 | 20 m | |

| SR/DR (t) | | Cargas máximas SR1/DR — 2 t / 4 t Maximum loads SR2/DR — 2,5 t / 5 t | | | | | | | | | | | | | | 2 t / 2,5 t 4 t / 5 t | | a |
|--------------|---------------------------------------|---|------|------|------|------|------|------|------------|------------|------------|------------|------------|------------|------------|--------------------------|-------------|---|
| PLUMA JIB | Alcance del gancho (m) Hook reach (m) | | | | | | | | | | | | | | | | | |
| | 52 | 50 | 47 | 45 | 42 | 40 | 37 | 35 | 32 | 30 | 27 | 25 | 22 | 20 | 15 | | | |
| 52 m | 0,95 | 1,01 | 1,09 | 1,16 | 1,27 | 1,35 | 1,49 | 1,6 | 1,78 | 1,93 | 2,19 | 2,39 | 2,5 / 2,77 | 2,5 / 3,09 | 2,5 / 4,25 | 29,1 / 15,9 | 24,1 / 12,9 | m |
| 50 m | — | 1,15 | 1,25 | 1,32 | 1,44 | 1,53 | 1,69 | 1,81 | 2,01 | 2,17 | 2,46 | 2,5 / 2,69 | 2,5 / 3,11 | 2,5 / 3,46 | 2,5 / 4,74 | 32,2 / 17,5 | 26,6 / 14,3 | m |
| 47 m | — | — | 1,35 | 1,42 | 1,55 | 1,65 | 1,82 | 1,94 | 2,16 | 2,33 | 2,5 / 2,64 | 2,5 / 2,88 | 2,5 / 3,32 | 2,5 / 3,7 | 2,5 / 5 | 34,2 / 18,6 | 28,3 / 15,2 | m |
| 45 m | — | — | — | 1,55 | 1,69 | 1,79 | 1,97 | 2,1 | 2,34 | 2,5 / 2,52 | 2,5 / 2,84 | 2,5 / 3,1 | 2,5 / 3,58 | 2,5 / 3,97 | 2,5 / 5 | 36,5 / 19,9 | 30,2 / 16,2 | m |
| 42 m | — | — | — | — | 1,75 | 1,85 | 2,04 | 2,18 | 2,42 | 2,5 / 2,6 | 2,5 / 2,94 | 2,5 / 3,2 | 2,5 / 3,69 | 2,5 / 4,1 | 2,5 / 5 | 37,6 / 20,5 | 31,1 / 16,7 | m |
| 40 m | — | — | — | — | — | 1,95 | 2,14 | 2,28 | 2,5 / 2,53 | 2,5 / 2,73 | 2,5 / 3,07 | 2,5 / 3,35 | 2,5 / 3,86 | 2,5 / 4,29 | 2,5 / 5 | 39,2 / 21,3 | 32,4 / 17,4 | m |
| 37 m | — | — | — | — | — | — | 2,15 | 2,29 | 2,5 / 2,54 | 2,5 / 2,74 | 2,5 / 3,09 | 2,5 / 3,37 | 2,5 / 3,88 | 2,5 / 4,31 | 2,5 / 5 | 37 / 21,4 | 32,5 / 17,4 | m |
| 35 m | — | — | — | — | — | — | — | 2,35 | 2,5 / 2,6 | 2,5 / 2,8 | 2,5 / 3,16 | 2,5 / 3,44 | 2,5 / 3,97 | 2,5 / 4,40 | 2,5 / 5 | 35 / 21,8 | 33,1 / 17,8 | m |
| 32 m | — | — | — | — | — | — | — | — | 2,35 | 2,5 / 2,53 | 2,5 / 2,85 | 2,5 / 3,11 | 2,5 / 3,59 | 2,5 / 3,99 | 2,5 / 5 | 32 / 20 | 30,3 / 16,3 | m |
| 30 m | — | — | — | — | — | — | — | — | — | 2,5 / 2,9 | 2,5 / 3,26 | 2,5 / 3,56 | 2,5 / 4,09 | 2,5 / 4,54 | 2,5 / 5 | 30 / 22,5 | 30 / 18,3 | m |
| 27 m | — | — | — | — | — | — | — | — | — | — | 2,5 / 3,3 | 2,5 / 3,59 | 2,5 / 4,14 | 2,5 / 4,59 | 2,5 / 5 | 27 / 22,7 | 27 / 18,5 | m |
| 25 m | — | — | — | — | — | — | — | — | — | — | — | 2,5 / 3,7 | 2,5 / 4,25 | 2,5 / 4,72 | 2,5 / 5 | 25 / 23,3 | 25 / 19 | m |
| 22 m | — | — | — | — | — | — | — | — | — | — | — | — | 2,5 / 4,2 | 2,5 / 4,67 | 2,5 / 5 | 22 / 22 | 22 / 18,7 | m |
| 20 m | — | — | — | — | — | — | — | — | — | — | — | — | — | 2,5 / 4,7 | 2,5 / 5 | 20 / 20 | 20 / 18,9 | m |

| CARACTERISTICAS DE MECANISMOS MECHANISMS FEATURES | | | | Mecanismos sin VF: Para 480V Mechanisms without VF: For 60Hz | | | | Potencias y velocidades: 20% más. Powers and speeds: 20% more | | | | | | | | |
|--|--------------------------------------|------------|------------|---|---------------------------------------|---------|---------------|--|----------------|-------------------|-----------------|--|---------------------------------------|------------|-------------------|--|
| *opcional *optional | | EC2566 SR2 | EC2580 SR1 | * EC2566 VF SR2 | * EC33100 VF SR2 | | | | | 3,8/4,5m TG825 VF | OG1108VF | TC 360 VF | TH 1010 | | | |
| t m/min | 1,3 64 | 2,5 32 | 2,5 8 | 1,1 82 | 2 41 | 2 10 | 1,3 0...64 | 2,5 0...32 | 1,1 0...102 | 2,5 0...51 | 0...25 m/min | 0...0,2 0,2...0,4 0,4...0,8 r/min | 0...15 15...30 30...60 m/min | 1 m/min | | |
| t m/min | 2,6 32 | 5 16 | 5 4 | 2,2 41 | 4 20,5 | 4 5 | 2,6 0...32 | 5 0...16 | 2,2 0...51 | 5 0...25,5 | | | | | | |
| kW | 18,4 | | | | 24,2 | | | | 2x3 | | 2X4 | | 1,8 | | 9,2 | |
| Maximo recorrido gancho Maximum hook course | SR 189 m en 4 capas máx./max. layers | | | | DR 94,5 m en 4 capas máx./max. layers | | | | | | 400V 50Hz | | Potencia necesaria Required power | | 34,2 kW *40 kW | |
| <p>IMPORTANTE: A medida que la altura bajo gancho de la grúa aumenta, disminuirá la capacidad de carga. Consultar el capítulo de capacidad de carga (04.015.00) del apartado del mecanismo de elevación del manual del fabricante.</p> | | | | <p>IMPORTANT: When the height under hook increases, the hoisting load will decrease. Consult the chapter of load capacity (04.015.00) of the hoisting mechanism of the manufacturer's handbook.</p> | | | | | | | | | | | | |



| DENOMINACION DENOMINATION | | L (m) | A (m) | H (m) | Peso (kg) Weight (kg) | | |
|---|--|--|-------|-------|--------------------------|-----------|------|
| Torre Tower section | { TR 8R TN 12R-TR 12R TN 4R TN 2R | | 8,07 | 1,19 | 1,19 | 2575 | |
| | | | 12,01 | 1,19 | 1,19 | 2915-3715 | |
| | | | 4,15 | 1,19 | 1,19 | 1170 | |
| | | | 2,37 | 1,19 | 1,19 | 770 | |
| Torre asiento de pista+Base punta torre+Orientación. Slewing table+Tower head base+Slewing mechanism | | | 3,14 | 1,92 | 2,15 | 2540 | |
| Estructura punta de torre+elevación Tower head structure+hoisting | | | 6,48 | 1,20 | 2,41 | 2250 | |
| Torre asiento pista+punta torre+orientación+elevación Slewing table+Tower head+slewing+hoisting | | | 8,12 | 1,92 | 2,44 | 4790 | |
| Tramo pluma Jib section | { P09-1R(I) P09-2R(II) P09-3R(III) P09-3N(IV) P09-4N(V) P09-5N(VI) P09-6N(VII) | | 10,13 | 0,87 | 1,13 | 1032 | |
| | | | 10,16 | 0,87 | 1,14 | 940 | |
| | | | 5,27 | 0,87 | 1,14 | 425 | |
| | | | 10,15 | 0,87 | 1,12 | 880 | |
| | | | 10,15 | 0,87 | 1,03 | 575 | |
| | | | 5,26 | 0,87 | 1,02 | 295 | |
| | | | 2,13 | 0,86 | 1,02 | 110 | |
| Polipasto Hook assembly | { SR DR | | 0,76 | 0,16 | 0,96 | 135 | |
| | | | 0,76 | 0,20 | 1,40 | 170 | |
| Carro Crab | { SR DR | | 1,00 | 1,33 | 0,73 | 110 | |
| | | | 1,04 | 1,37 | 0,88 | 175 | |
| Contrapluma con plataformas Counterjib with platforms | | | 10,70 | 1,41 | 0,43 | 1575 | |
| Plataforma y cabina Platform and cabin | | | 3,69 | 1,63 | 2,25 | 820 | |
| Base grúa Crane base | { Estacionaria III/Stationary III Traslación/Travelling | { BEX 38R BEX 45 BTX 38R BTX 45 | | 6,38 | 0,84 | 1,47 | 3800 |
| | | | | 7,37 | 0,84 | 1,47 | 4380 |
| | | | | 6,02 | 1,73 | 1,73 | 5230 |
| | | | | 7,01 | 1,62 | 1,73 | 5995 |
| Contrapeso Counterweight | { Grande / Big Pequeño / Small | | 1,08 | 0,50 | 2,02 | 2360 | |
| | | | 1,08 | 0,50 | 1,30 | 1500 | |
| Lastre Ballast | { Est. III-Stationary III / Trasl.-Travelling Est. IV / Stationary IV | | 4,00 | 0,34 | 1,30 | 4100 | |
| | | | 2,09 | 0,34 | 2,10 | 3450 | |
| Torre de montaje Jacking cage | | | 7,14 | 1,76 | 1,71 | 3105 | |

| LASTRES INFERIORES / LOWER BALLASTS | | | | Para alturas intermedias tomar el lastre correspondiente a la altura superior For intermediate heights take the ballast corresponding to the higher height | | | | | | | | |
|--|---|---------------------------------|-------------------|---|----|----|----|---|----|----|--|----|
| Viento fuera de servicio / Out of service wind. FEM 1005 - C25 | | | | | | | | | | | | |
| Altura bajo gancho (m) / Height under hook (m) | | | | 16 | 22 | 30 | 36 | 40 | 44 | 47 | | |
| Número de piedras de lastre Number of ballast blocks | Est.III Stationary III Trasl. Travelling | Piedras:4100kg Blocks:4100kg | BEX 45 / BTX 45 | 6 | | 8 | | 10 | | 12 | | 16 |
| | | | BEX 45L | 8 | | | 10 | | | 12 | | 16 |
| | | | BEX 38R / BTX 38R | 6 | 8 | 10 | 12 | 16 | | — | | |
| | | | BEX 38RL | 8 | | 10 | | 12 | | 16 | | — |
| | Est.IV Stationary IV | Piedras:3450kg Blocks:3450kg | BE 442A | hasta 31,9 m 16 piedras until 31,9 m 16 blocks | | | | hasta 40,1 m 20 piedras until 40,1 m 20 blocks | | | | |



| TORRES / TOWERS | ALTURA / HEIGHT (m) | Diagrama de la torre | | | | | ALTURA / HEIGHT (m) | TORRES / TOWERS | |
|-----------------|---------------------|----------------------|------------|---------------|------------|---------------|---------------------|-----------------|----|
| 1 | 4,5 | TN 4R | 137.32.000 | TN 4R | TN 4R | TN 4R | TN 4R | 4,5 | 1 |
| 2 | 8,5 | TN 4R | | TN 4R | TN 4R | TN 4R | TN 4R | 8,5 | 2 |
| 3 | 20,3 | TN 12R | 137.31.000 | TN 12R | TN 12R | TN 12R | TN 12R | 20,3 | 3 |
| 4 | 32,1 | TN 12R | | TN 12R | TN 12R | TN 12R | TN 12R | 32,1 | 4 |
| 5 | 39,9 | TR 8R | 137.30.000 | TR 8R | TR 8R | TR 8R | TR 8R | 39,9 | 5 |
| 6 | 43,8 | TX-90/TXXR | 202.36.500 | T 3-90 | TX-90/TXXR | T 3-90 | TX-90/TXXR | 43,8 | 6 |
| 7 | 46,7 | T 3-90 | 133.32.000 | T 3-90 | T 3-90 | T 3-90 | T 3-90 | 46,7 | 7 |
| 8 | 49,7 | T 3-90 | | T 3-90 | T 3-90 | T 3-90 | T 3-90 | 49,7 | 8 |
| 9 | 58,3 | T6-150A | 161.31.300 | T6-150A | T6-150A | T6-150A | T6-150A | 58,3 | 9 |
| 10 | 56,3 | T6-150 | 161.31.000 | TL20 / Tx 150 | 161.36.000 | TL20 / Tx 150 | TL20 / Tx 150 | 56,3 | 10 |
| 11 | 60,2 | TL20 | 153.31.000 | TL20 | 153.31.000 | TL20 | TL20 | 60,2 | 11 |
| 12 | 64,1 | TS20A | 200.31.500 | TS20A | 200.31.500 | TS20A | TS20A | 64,1 | 12 |
| 13 | 68 | TS20 | 153.31.600 | TS20 | 153.31.600 | TS20 | TS20 | 68 | 13 |
| 14 | 75,8 | TSR 20A | 200.31.700 | TSR 20A | 200.31.700 | TSR 20A | TSR 20A | 75,8 | 14 |
| 15 | 79,8 | TSR 20 | 153.31.800 | TSR 20 | 153.31.800 | TSR 20 | TSR 20 | 79,8 | 15 |

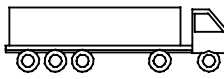
| | |
|------------|------------|
| AR 12 | 137.21.000 |
| ARD 12 | 137.21.800 |
| AN 90 | 133.21.000 |
| AND 90 | 133.21.800 |
| AN 150 | 161.21.000 |
| AND 150 | 161.21.050 |
| AL 20 | 153.21.800 |
| ALD 20 | 160.21.250 |
| AS 20 | 160.21.010 |
| ASD 20/24 | 160.21.080 |
| ASR 20 | 160.21.200 |
| ASRD 20/24 | 156.21.000 |

Viento fuera de servicio / Out of service wind: FEM 10015 - C25

Para otras configuraciones de torre, consultar.
For other tower configurations, consult.

Transporte grúa de 46 m bajo gancho con estacionaria I
46 m under hook crane transport with stationary I

En camiones / In trucks

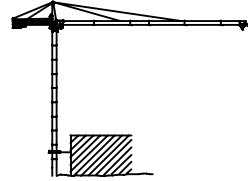


3 unidades / 3 units

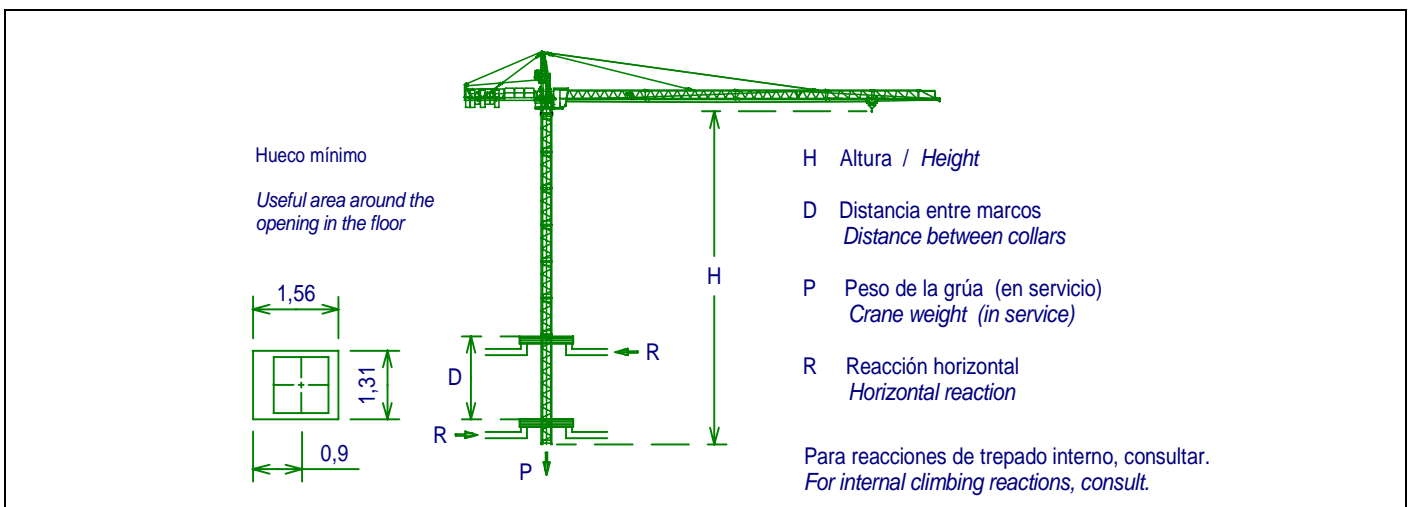
En contenedores / In containers

HIGH CUBE 40'

3 unidades / 3 units



Máximo número de torres TN 4R a colocar por encima del último arriostamiento: 8
Maximum TN 4R mast sections above the last tie-back: 8



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Fecha / Date: 12-03-2010

DELEGACION / DELEGATION