LIEBHERR

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I--I ==> Wind 12.8m/s

Cuaderno de tablas de cargas

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Liebherr-Werk Ehingen GmbH

Postfach 1361

89582 Ehingen/Donau Alemania

Teléfono: +49 (0)7391/502-0 Fax: +49 (0)7391/502-3399 E-mail: info.lwe@liebherr.com www.liebherr.com Texto bàsico: tlt_418100-01-10.pdf

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Prefacio

Generalidades

Esta grúa se ha concebido con los últimos adelantos de la tecnología y está conforme a los reglamentos técnicos reconocidos relativos a la seguridad. Sin embargo, una utilización incorrecta podría implicar peligros mortales al usuario y/o a terceras personas o podría poner en peligro la grúa y/o otros valores materiales.

Esta grúa puede utilizarse sólo:

- Si se encuentra en un estado técnico perfecto
- Para un uso conforme a lo previsto
- Po personal capacitado, que actúe consciente del peligro y de la seguridad
- Si no existen anomalías relevantes para la seguridad
- Si no se realizaron transformaciones en la grúa.

Las anomalías que pudieran afectar a la seguridad, deberán eliminarse inmediatamente.

Está prohibido toda transformación de la grúa excepto si tiene un acuerdo por escrito de la empresa Liebherr-Werk Ehingen GmbH.

Registrador de datos

Esta grúa está dotada con un registrador de datos. Entre otros, se encuentran los siguientes datos:

- Fecha y hora
- Estado de equipo prescrito de la grúa
- Carga real
- Capacidad de carga utilizada en porcentaje de la grúa
- Alcance (radio de trabajo)
- Ángulo de pluma principal, ángulo de punta
- Largo total de la pluma telescópica, largo de los diferentes elementos telescópicos
- Cada accionamiento del dispositivo de puenteo

Los datos registrados se pueden leer con el software correspondiente.

Indicaciones de seguridad y de aviso

Ls indicaciones de seguridad y de aviso conciernen a todas las personas que trabajan con la grúa.

Toda persona implicada en la grúa deberá adoptar un comportamiento determinado con los términos utilizados en la documentación de la grúa de **PELIGRO**, **ADVERTENCIA**, **ATENCIÓN** y **AVISO**.

| Seña- les de aviso | Palabra de señal | Explicación |
|--------------------------|---------------------|--|
| \triangle | PELIGRO | Significa una situación peligrosa, la muerte o lesiones corporales graves que pueden ocurrir como consecuencia si no lo evita. ¹⁾ |
| \triangle | ADVER- TENCIA | Significa una situación peligrosa, la muerte o lesiones corporales graves que podrían ocurrir como consecuencia si no lo evita. 1) |
| \triangle | ATENCIÓN | Significa una situación peligrosa, la muerte o lesiones corporales ligeras o medianas que que podrían ocurrir como consecuencia si no lo evita. 1) |
| | AVISO | Significa una situación peligrosa, daños materiales que que podrían ocurrir como consecuencia si no lo evita. |

¹⁾ La consecuencia puede ser también daños materiales.



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Otras indicaciones

La palabra **Indicación** utilizada en la documentación de la grúa, da a toda persona que intervenga en la grúa, indicaciones útiles y consejos importantes.

| Letras | Palabra de señal | Explicación |
|----------|---------------------|---|
| 1 | Indicación | significa indicaciones útiles y consejos. |

Documentación de la grúa

La documentación de la grúa abarca:

- Todos los documentos suministrados en papel o de forma digital
- Todos los programas y aplicaciones suministrados
- Todas las informaciones, actualizaciones y suplementos de la documentación de la grúa puestos a disposición con posterioridad

La documentación de la grúa:

- Le permite utilizar la grúa con seguridad
- Le ayuda a agotar las posibilidades de aplicación de la grúa autorizadas
- Le ofrece indicaciones sobre cómo funcionan importantes componentes y sistemas



Nota

Terminología en la documentación de la grúa

En la documentación de la grúa se utilizan determinados términos.

▶ Para evitar malentendidos, se ruega utilizar siempre el mismo término.

Traducción de la versión alemana de la documentación de la grúa: La documentación de la grúa fue traducida según leal saber y entender. Liebherr-Werk Ehingen GmbH no se responsabiliza de los errores de traducción. La versión correcta determinante es sólo la documentación de la grúa en idioma alemán. Si en la lectura de esta documentación de la grúa, encuentra fallos o malentendidos, comuníquelo inmediatamente a la empresa Liebherr-Werk Ehingen GmbH.



ADVERTENCIA

¡Peligro de accidentes en caso de un mando erróneo de la grúa!

¡El manejo defectuoso de la grúa puede causar accidentes!

¡Las personas pueden morir o lesionarse gravemente!

¡Se puede ocasionar daños materiales!

- ▶ ¡Sólo un personal técnico autorizado y capacitado puede intervenir en la grúa!
- ▶ La documentación de la grúa pertenece a la grúa y debe estar siempre a disposición en la grúa.
- ► Se deberán observar la documentación de la grúa, los reglamentos y las prescripciones vigentes del lugar de aplicación (por ej. prevenciones contra accidentes).

La utilización de la documentación de la grúa:

- Permite familiarizarse con la grúa
- Evita fallos debidos a un manejo indebido

Observar la documentación de la grúa:

- aumenta la fiabilidad en el uso
- Aumenta la duración de vida de la grúa
- Minimiza costos de reparación y paradas por averías

Mantenga siempre la documentación de la grúa al alcance, en la cabina del conductor o en la cabina del gruista.





ADVERTENCIA

¡Documentación de la grúa anticuada!

¡Si no se respetan ni se añaden las informaciones, actualizaciones y suplementos posteriores de la documentación de la grúa, existe peligro de accidentes!

¡Las personas pueden morir o lesionarse gravemente!

¡Se puede ocasionar daños materiales!

- ▶ Respetar y añadir todas las informaciones, actualizaciones y suplementos de la documentación de la grúa puestos a disposición con posterioridad.
- Asegurarse de que todas las personas implicadas conocen y dominan siempre la última versión de la documentación de la grúa.



ADVERTENCIA

¡Documentación de la grúa no entendida!

¡Existe peligro de accidentes si no se entendieron partes de la documentación de la grúa y se emprendieron trabajos en o con la grúa!

¡Las personas pueden morir o lesionarse gravemente!

¡Se puede ocasionar daños materiales!

► Aclarar las preguntas con relación a la documentación de la grúa, antes de emprender el trabajo correspondiente, con el Servicio de Asistencia Técnica de LIEBHERR.

Este documento no puede ser reproducido, ni en su totalidad ni en parte, distribuido, o utilizado a efectos de competencia. Se reserva todo derecho de autor conforme a las leyes de propiedad.

Toda prevención contra accidentes, manuales de instrucciones para el uso, tablas de cargas, etc., se han editado de acuerdo al uso que se ha previsto para esta grúa.



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Fig.110001

Marca CE

La marca CE es una señalización según el derecho de la Unión Europea:

- ¡Las grúas con la marca CE cumplen con las directrices europeas relativas a las máquinas
 2006/42/CE y EN 13000! Sobre placa de características de la grúa con marca CE, véase fig. 1
- Las grúas que se utilicen fuera del ámbito de aplicación respectivo no necesitan ninguna marca
 CE. Sobre placa de características de la grúa sin marca CE, véase fig. 2
- Está prohibido poner en servicio las grúas no marcadas con CE, que no cumplen con las directrices europeas aplicables para productos específicos, si para el país es obligatoria la marca CE.
- ¡Está prohibido autorizar el funcionamiento de grúas cuyo grado de utilización excede el 85% del momento de vuelco según la norma ASME B30.5, dentro de la Comunidad Europea o en países en donde se autoriza una capacidad de utilización con muy baja estabilidad (por ejemplo según la ISO 4305)! Son válidos los respectivos reglamentos nacionales. ¡Dichas grúas no deberán tener la marca CE!

Uso conforme a lo previsto

El uso conforme de la grúa de acuerdo a lo previsto comprende exclusivamente la elevación y descenso en posición vertical de cargas no atascadas cuyo peso y centro de gravedad se conocen.

Para ello, un gancho o un motón de gancho autorizado por Liebherr deberá estar con el cable de elevación colocado y deberá accionarse sólo en estados de equipo autorizados.

El desplazamiento de la grúa con o sin cargas enganchadas está autorizado sólo si existen tablas de desplazamiento o de cargas respectivamente autorizadas. Los estados de equipo y las medidas de seguridad previstas deberán observarse de acuerdo a la documentación de la grúa.

Cualquier otra utilización o una explotación más allá del límite se considerará como un uso **no conforme** a lo previsto.

Sobre el uso conforme a lo previsto se incluyen igualmente el cumplimiento de las medidas de seguridad, las condiciones, requisitos previos, estados de equipo y procedimientos de trabajo estipulados en la documentación de la grúa (por ejemplo, manual de instrucciones para el uso, tabla de cargas, tabla de levantamiento y descenso, planificador de utilización).

El fabricante no se responsabiliza por **ningún** daño que se haya producido por infringir el uso conforme a lo previsto o por haber dado una utilización no autorizada de la grúa. Sólo el propietario, el explotador y el usuario de la grúa, son los únicos responsables de los riesgos que puedan resultar.

Uso no conforme a lo previsto

Los usos **no** conforme a lo previsto son los siguientes:

- Operar fuera del campo de los estados de equipo autorizados por las tablas de cargas
- Operar fuera del campo del alcance y campos de giro autorizados por las tablas de cargas
- Seleccionar las tablas de cargas que no corresponden al estado de equipo actual
- Mediante código o entrada manual, selecionar un estado de equipo, que no se corresponda con el estado de equipo real
- Trabajar con dispositivos de seguridad puenteados o desactivados, por ejemplo limitador de cargas puenteado o con limitador de elevación puenteado
- Aumentar el alcance de la carga levantadas después de desconectar el LMB, por ejemplo tirando transversalmente la carga
- Utilización del indicador de reacción de apoyo como función de seguridad contra vuelco
- Utilización de elementos de equipo no autorizados para la grúa
- Utilización para eventos deportivos o recreativos especialmente su uso para el "Salto de elástico"
 (Bungee jump) y/o 'Dinner in the sky'
- Marcha por carreteras en un estado de marcha no autorizado (cargas de ejes, dimensión)
- Desplazamiento de la grúa con equipo en un estado de marcha no autorizado
- Presionar, mover o elevar cargas con la regulación de nivel, largueros corredizos o cilindros de apoyo
- Presionar, mover o elevar cargas accionando el mecanismo giratorio, el sistema de basculamiento o sistema telescópico





- Arrancar con la grúa materias atascadas
- Utilizar largo tiempo la grúa para trabajos de transbordos
- Soltar repentinamente la presión de la grúa (servicio con cuchara valva o con tolva de material a granel)
- Utilizar la grúa cuando la carga suspendida en la grúa va a cambiar su peso, por ejemplo si se llena en el contenedor que está enganchado en el gancho de carga, excepto:
- La función del limitador de cargas se controló antes con una carga conocida
 - · La cabina del gruista está ocupada
 - · La grúa está en capacidad de funcionamiento.
 - El tamaño del contenedor se ha seleccionado de tal forma que se excluye que la grúa se sobrecargue con una carga llena conforme a los valores válidos de la tabla utilizada

La grúa **no** deberá utilizarse para:

- Amarrar una carga atascada cuyo peso y centro de gravedad se desconoce y si se debe liberar sólo por ejemplo por corte con soplete
- Transportar personas excepto en la cabina del conductor
- Transportar personas en la cabina del gruista durante la marcha
- Transportar personas con el elemento elevador de carga (eslingas) y encima de la carga
- Transportar personas con las cestas de trabajo, si no lo incluye las legislaciones nacionales de la Autoridad responsable de la prevención en el trabajo
- Transportar cargas al chasis inferior
- El servicio con dos ganchos sin el equipo adicional
- El servicio de transbordos durante largo tiempo
- El servicio de grúa en un bote a condición que se hayan prescrito condiciones y haya una autorización por escrito de parte de Liebherr Werk Ehingen GmbH

Toda persona implicada en la utilización, manejo, montaje y mantenimiento de la grúa deberá leer y aplicar la documentación de la grúa.

Dispositivos de seguridad

Se deberá poner especial cuidado a los dispositivos de seguridad integrados en la grúa. Los dispositivos de seguridad deben controlarse siempre si su funcionamiento es correcto. En caso que los dispositivos de seguridad no funcionen o funcionen incorrectamente, no deberá ponerse en funcionamiento la grúa.



Nota

Su divisa deberá ser siempre:

► ¡Prioridad a la seguridad!

La grúa está construida según las prescripciones vigentes para el servicio de grúa y servicio de traslación y comprobada por la autoridad competente.

Componentes del equipo y piezas de repuestos



ADVERTENCIA

¡¡Peligro de muerte si no se utilizan las piezas de equipo originales!

¡Si se pone en servicio la grúa con componentes de equipos que **no** son originales, la grúa puede funcionar incorrectamente y causar accidentes mortales!

¡Los elementos de la grúa pueden dañarse!

- ▶ ¡Hacer funcionar la grúa sólo con piezas de equipamiento originales!
- ▶ ¡Está prohibido poner en servicio la grúa con piezas del equipamiento que **no** forman parte de la grúa!
- ▶ ¡Si existen dudas sobre el origen de piezas del equipamiento, contactar con el Servicio de Asistencia Técnica de LIEBHERR!





ADVERTENCIA

¡No tiene validez el permiso de circulación de la grúa ni la garantía del fabricante! Si se modifican, manipulan o cambian sin autorización las piezas originales montadas (por ej. desmontaje de piezas, montaje de piezas no originales), entonces pierde validez el permiso de circulación de la grúa así como la garantía del fabricante.

- ¡No modificar las piezas originales montadas!
- ¡No desmontar las piezas originales!
- ▶ ¡Utilizar sólo repuestos originales de Liebherr!
- ▶ ¡Si existen dudas sobre el origen de piezas de recambio, contactar con el Servicio de Asistencia Técnica de LIEBHERR!

Para obtener piezas del equipamiento y de recambio, tener a mano e indicar siempre el número de grúa.

Definición de las direcciones para la grúa automotriz

Moverse marcha adelante: significa ir con la cabina del conductor por delante.

Moverse marcha atrás: significa ir con las luces traseras del chasis inferior de la grúa por delante.

Delante, **atrás**, **a la derecha**, **a la izquierda** se refieren, en la **cabina del conductor**, al chasis inferior de la grúa. La cabina del conductor se encuentra siempre delante.

Delante, **atrás**, **a la derecha**, **a la izquierda** se refieren, en la **cabina del gruista**, al chasis superior de la grúa. Delante significa siempre en dirección de la pluma descendida.

Definición de las direcciones para la grúa sobre orugas

Moverse marcha adelante: moverse hacia adelante en relación con la vista del gruista sentado en la cabina del gruista. Posición de la plataforma giratoria en 0 ó 180°

Moverse marcha atrás:moverse hacia atrás en relación con la vista del gruista sentado en la cabina del gruista. Posición de la plataforma giratoria en 0 ó 180°

Delante, **atrás**, **a la derecha**, **ia la zquierda** se refieren siempre con el **tren de rodaje** desde la situación de los dispositivos tensores de la cadena. Los dispositivos tensores de la cadena están en el tren de rodaje siempre delante.

Delante, **atrás**, **a la derecha**, **a la izquierda** se refieren a la dirección de la mirada del gruista que está sentado en la **cabina del gruista**. Delante significa siempre en dirección de la pluma descendida.

Equipos opcionales y funciones

Los equipos y funciones marcados con un * son opcionales y **no** forman parte integrante de la grúa estándar (a pedido del cliente).



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40 Cuaderno de tablas de cargas

1 Informaciones básicas



Nota

- ► El valor de capacidad de carga en las tablas de cargas está dado en toneladas (t), librakilo (kips) o libras (lbs).
- ► El alcance es la distancia horizontal del motón de gancho desde el eje de giro del chasis superior, medida en el suelo. Esta indicación es válida bajo carga nominal, es decir, incluyendo la flexión elástica de la pluma.
- ► En las capacidades de carga señaladas se ha contemplado el peso del cable de elevación en la colocación del cable según la tabla de cargas. Si se ajusta más alto, se reduce la capacidad de carga en el peso de los ramales adicionales del cable de elevación. Los pesos en los elementos elevadores y de fijación se restan de la carga indicada.
- ► En el caso de servicio de dos ganchos no se ha contemplado el cable de elevación en la segunda posición de carga. El peso de todos los ramales del cable de elevación se tiene que quitar de la capacidad de carga.
- ► En el caso de cifras, las posiciones de los decimales se separan a través de un punto ".". Las posiciones de los decimales están a la derecha del punto ".".



ADVERTENCIA

¡Muerte o graves daños materiales por caída de la grúa o fallo de las estructuras de la grúa! Las personas pueden morir o lesionarse gravemente.

Se pueden ocasionar grandes daños materiales.

- ► Están prohibidos los trabajos fuera del estado permitido del equipo, de las cargas y áreas de giro permitidas según la tabla de cargas.
- Mover el sistema de la pluma también sin carga sólo dentro de las zonas permitidas según la tablas de cargas o tablas de levantamiento y descenso.
- Mover el sistema de la pluma al encender el "servicio de montaje" sólo dentro de las zonas permitidas según la tablas de cargas o tablas de levantamiento y descenso.
- ► Las limitaciones e indicaciones se señalan parcialmente mediante marcas (signos, cifras o letras) en los símbolos de modos de servicio. Éstas se tienen que cumplir.



Nota

En el caso de modos de servicio con coche lastre o lastre suspendido:

▶ Determinar el peso óptimo de lastre Derrick con el planificador de aplicación LICCON.



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Fig.195219





ADVERTENCIA

¡Mal uso de la grúa!

Peligro de vuelco de la grúa, fallo de las estructuras de la grúa.

Muerte o lesiones graves, altos daños materiales.

- No sobrecargar la grúa.
- Cumplir el estado del equipamiento de la tabla de cargas correspondiente.
- Cumplir las longitudes de la pluma, radio de la pluma y campos de giro de las tablas de cargas correspondientes.
- ► Controlar la función de todos los dispositivos de aviso y seguridad.
- ▶ Comprobar los datos de peso de la carga elevada.
- ► Asegurar que la carga no se mueva pendularmente.
- La tracción universal de la carga está prohibida.
- ▶ No usar la grúa para desprenderse de la carga.
- ► Cumplir con la distancia a las fosas, sótanos y taludes, véase el manual de instrucciones de la grúa capítulo 2.04.
- ▶ Asegurarse de que el subsuelo asegura el peso máximo de servicio de la grúa e inclusive el peso de carga.
- ► Cumplir la distancia de seguridad con los cables eléctricos aéreos presentes de tensión, véase el manual de instrucciones de la grúa capítulo 2.04.

2 Servicio de la grúa "Grúa apoyada"



Nota

➤ Solo grúa sobre orugas LR 1750 y LR 1750/2 y grúa sobre orugas con tren de rodaje de base de apoyo reducida (LR 1400/2-W y LR 1600/2-W).



ADVERTENCIA

¡Mal uso de la grúa!

Peligro que la grúa se vuelque.

Muerte o lesiones graves, altos daños materiales.

- Estabilizar la grúa antes de girar el chasis superior de la grúa.
- ▶ Desplegar los largueros de apoyo en la base especificada de apoyo de la tabla de cargas correspondientes y/o extraer.
- ▶ Montar las placas de apoyo y/o las placas de base en los cilindros de apoyo, véase el manual de instrucciones de la grúa en el capítulo 3.10.
- ► Mantener la inclinación máxima autorizada de la grúa, véase cuaderno de tablas de cargas del capítulo 40.65.40.
- ▶ Asegurarse de que la viga de orugas no tenga ningún contacto con el suelo.
- ▶ Asegurarse que la grúa esté nivelada horizontalmente durante el servicio de la grúa.

3 Servicio de grúa "Grúa sobre viga de orugas"



ADVERTENCIA

¡Mal uso de la grúa!

Peligro que la grúa se vuelque.

Muerte o lesiones graves, altos daños materiales.

- ► Asegurarse que el suelo sea plano y sin inclinaciones.
- ▶ Mantener la inclinación máxima autorizada de la grúa, véase cuaderno de tablas de cargas del capítulo 40.65.40.

4 Desplazar la grúa con carga

Véase en el manual de instrucciones de la grúa, el cap. 4.10.

¡Página vacía!

1 Utilización de la grúa (colectivo de carga)

Las grúas automotrices y las grúas sobre orugas de Liebherr están concebidas para el servicio de montaje (categoría de acumulador de carga = "ligera" = Q1 ó L1). Si las grúas se utilizan con el servicio de imán, con cuchara almeja o servicio de transbordo (colectivo de carga = "medio" o "superior"), se deben observar diferentes puntos. Véase el capítulo 8.01 "Control periódico de las grúas" en el manual de instrucciones para el uso de la grúa.



Nota

Si la grúa está sometida a un colectivo de carga de promedio alto, por ejemplo, operando en el servicio de imán, con cuchara almeja o servicio de transbordo:

Realizar intervalos de control en intervalos cortos.

AVISO

¡Desgaste prematuro y fisuras en los componentes portantes!

¡Si la grúa se utiliza con el servicio de imán, con cuchara almeja o servicio de transbordo, entonces se tiene que contar con un desgaste antes de tiempo de las piezas del mecanismo de accionamiento y/o con fisuras en las piezas de acero principales!

Reducir la capacidades de carga global en un 50 porciento frente a los datos especificados en la tabla de cargas correspondiente.

AVISO

¡Alto desgaste del cable y daños en el cable!

Para mantener el más mínimo desgaste de los cables de elevación con el servicio de imán, con cuchara almeja o servicio de transbordo, se recomienda utilizar un largo de cable especial Si no se utiliza una largura de cable especial, se pueden enroscar las capas de cable que no se utilizan. ¡En caso de fuertes tracciones de cable, el cable puede tirarse en las capas de cable que no se utilizan y causar daños de cable!

➤ Con el servicio de imán, cuchara almeja o servicio de transbordo, utilizar un largo de cable especial para que todo el largo de cable se desenrolle en la posición más inferior del motón de gancho (hasta quedar unas 3-5 vueltas restantes de cable)

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1 Controlador de cargas LICCON



ADVERTENCIA

¡Peligro de muerte o de graves daños materiales al desplomarse la grúa o fallos de la estructura de la grúa!

¡Las personas pueden morir o lesionarse gravemente!

¡Se puede ocasionar daños materiales!

- ► Asegurarse que los dispositivos de aviso y seguridad funcionen.
- ▶ Comprobar la funcionalidad del controlador de cargas LICCON antes de cada puesta en marcha.
- Ajustar el controlador de cargas LICCON al estado del equipo actual antes de cada puesta en marcha.
- ▶ No utilizar el controlador de cargas LICCON como medio normal para el servicio del dispositivo de desconexión.



Nota

▶ El controlador de cargas LICCON desconecta el movimiento de basculamiento y elevación de la grúa al sobrepasar el momento de carga admisible del grúa. Es posible descargar efectuando un movimiento opuesto.

A controlar en el sistema de seguridad antes de cada trabajo con la grúa:

- El controlador de cargas LICCON tiene que ajustarse al estado actual del equipo de la grúa
- El controlador de cargas LICCON tiene que funcionar
- La funcionabilidad de todos los interruptores de fin de carrera tiene que ser comprobada
- El interruptor de fin de carrera con leva/transmisor de giro del cabrestante tienen que estar correctamente ajustados
- La funcionabilidad de todos los equipos de medición (por ej. transmisor de longitud, transmisor del ángulo, transmisor de presión, anemómetro) tiene que ser comprobada

109911-00 40.25 Cabrestantes

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40.25 Cabrestantes 109911-00

1 Tracción de cable



Nota

▶ Cada cabrestante está diseñado para una tracción máxima de cable. En la tabla siguiente se describen las tracciones máximas de cable. Estas tracciones de cable no deberán sobrepasarse. Respectivamente se deberá seleccionar de la "tabla de la colocación del cable de elevación" la cantidad mínima de ramales de cable de elevación (colocación de cable) de acuerdo al peso de la carga por levantarse, véase cuaderno de tablas de cargas en el cap. 40.90.

► En el montaje de equipamientos adicionales, controlar la guía del cable en los cabrestantes para evitar cables que se quedan flojos.

| Tipo de cable de ele- vación | Cable de elevación | | Utilización |
|---------------------------------|--------------------|-----------------|---------------|
| | Diámetro de cable | Tracción máxima | |
| | | | Cabrestante 1 |
| Tipo1 | 28 mm | 180 kN (18.1 t) | Cabrestante 2 |
| | | | Cabrestante 6 |
| Tipo2 | 25 mm | 125 kN (12.6 t) | Cabrestante 6 |
| Tipo3 | 28 mm | 160 kN (16.1 t) | Cabrestante 6 |

Válido para las grúas telescópicas:

 Al retraer se tiene que evitar durante el accionamiento del cabrestante en el sentido de elevación, que el motón de gancho toque el suelo y por consiguiente cause cable flojo. La velocidad del movimiento del cable de elevación debe ajustarse con la velocidad del movimiento telescópico.



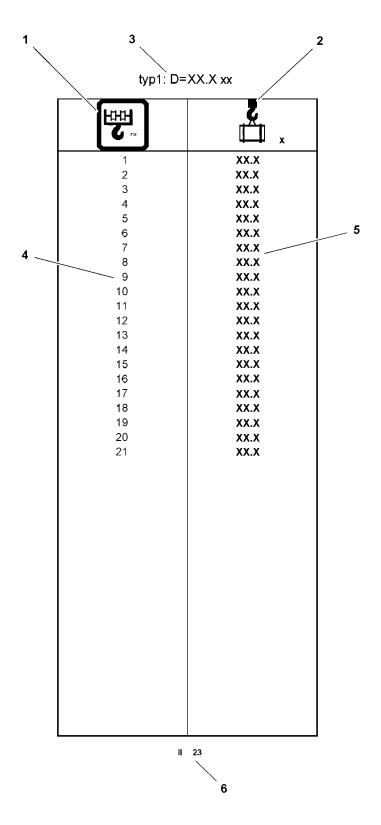


Fig.115577: Tabla de colocación del cable de elevación

1 Colocación del cable de elevación



Nota

- Colocar el cable de elevación en función de la tracción máxima de cable y del peso de la carga de elevación entre el cabezal de la pluma y el motón de gancho.
- ▶ Al colocar el cable varias veces se reduce la capacidad de carga máxima posible debido al frotamiento de poleas y a la flexión del cable.
- ➤ Sacar la capacidad máxima de carga en función del número de ramales del cable de elevación de la "tabla Colocación del cable de elevación", véase cuaderno de tablas de cargas capítulo 40.90.
- ► Antes de la colocación controlar si el número de ramal mínimo del cable de elevación y el peso mínimo de motón de gancho son necesarios, véase cuaderno de tablas de cargas capítulo 40.40.
- ► El controlador de cargas LICCON tiene que ajustarse con el número de ramal del cable de elevación.



Nota

Para aumentar la vida útil del cable, tener en cuenta los siguientes puntos:

- Se recomienda una colocación del cable más alta para reducir la tracción.
- ► Cuidado del cable, véase el manual de instrucciones de la grúa, capítulo 8.04.

2 Tabla de colocación del cable de elevación

Los datos de la "tabla de colocación del cable de elevación" representada son a modo de ejemplo y no tienen que coincidir con los datos presentes de la grúa.

- 1 Símbolo de la colocación del cable de elevación
- 2 Símbolo de capacidad de carga
- 3 Tipo de cable y diámetro del cable
 - este dato aparece solo en caso de varios cables de elevación diferentes
- 4 Número de ramales del cable de elevación
- 5 Capacidad máxima de carga permitida en toneladas (t), librakilo (kips) o libras (lbs)
 - · Dependiendo de la colocación del cable de elevación
- 6 Especificaciones de página

2.1 Servicio de grúa en servicio simple

En el caso de servicio de grúa en servicio simple solo se utiliza 1 cabrestante de cable de elevación. La colocación de cable necesaria puede consultarse en la "Tabla de colocación del cable de elevación".

Ejemplo para determinar la colocación de cable:

Capacidad de carga = 280 t

La colocación de cable necesaria con 1 cabrestante de cable de elevación es, según la "Tabla de colocación de cable de elevación":

- 18 ramales de cable (287.0 t)

2.2 Servicio de grúa en servicio paralelo

En el caso de servicio de grúa en servicio paralelo se utilizan 2 cabrestante de cable de elevación. La colocación de cable necesaria se determina en 3 pasos.

Paso 1: Dividir la carga por 2, ya que la carga se absorbe en las mismas partes del cabestrante de cable de elevación 1 y 2.

Paso 2: Determinar la colocación de cable necesaria para 1 cabestrante de cable de elevación.





Paso 3: Aplicar la colocación de cable definida en ambos cabestrantes.

Ejemplo para determinar la colocación de cable:

Capacidad de carga = 280 t

Paso 1: 280 t / 2 cabestrantes de cable de elevación = 140 t

Paso 2: La colocación de cable necesaria con 1 cabrestante de cable de elevación es, según la "Tabla de colocación de cable de elevación":

- 9 ramales de cable (153.2 t)

Paso 3: La colocación de cable necesaria con 2 cabrestantes de cable de elevación en el servicio paralelo es con ello de:

- 2 x 9 ramales de cable = 18 ramales de cable (2 x 153.2 t = 306.4 t)

3 Tracciones máximas de cable para países con un factor de seguridad de cable 5 según ASME B30.5 (Canadá, EE.UU. y Taiwan)



Nota

- ▶ En países dónde se aplica la normativa nacional ASME B30.5, es reglamentaria una seguridad quíntuple del cable para cables de elevación antigiratorios. Las capacidades de carga resultantes de las tracciones de cable, véase "Tabla de colocación del cable de elevación" cuaderno de tablas de cargas, capítulo 40.90, se determinan según DIN NE 13000 con una seguridad de cable de 4.5.
- ▶ En la norma DIN EN 13000, al contrario de la ASME B30.5 se toma en cuenta así mismo el rendimiento de la tracción de cable. Por eso, en los países en los que se aplique la normativa nacional ASME B30.5, se tiene que aplicar las capacidades de carga resultantes de las tracciones de cable de las tablas siguientes en el caso de colocación de cable hasta 13 veces. A partir de 14 ramales se tienen en cuenta las capacidades de carga máximas según DIN EN 13000. véase la "Tabla de colocación del cable de elevación" cuaderno de tablas de cargas, capítulo 40.90. Por lo que respecta a ASME B30.5 a partir de 14 ramales no hay más restricciones.
- ➤ Si se respeta lo indicado en el capítulo 5.3.2.1.1 (d) en las normas ASME B30.5 se pueden utilizar igualmente las tracciones de cable según la DIN EN 13000.

3.1 ASME B30.5-Tabla de cable de elevación-Tipo 1

| Número de ra- mal | Capacidad máxima de carga (DIN EN 13000) | Capacidad máxima de carga (ASME B30.5) |
|----------------------|--|--|
| 1 | 18.1 t | 16.5 t |
| 2 | 35.9 t | 33.0 t |
| 3 | 53.4 t | 49.5 t |
| 4 | 70.7 t | 66.1 t |
| 5 | 87.7 t | 82.6 t |
| 6 | 104.5 t | 99.1 t |
| 7 | 121.0 t | 115.6 t |
| 8 | 137.2 t | 132.1 t |
| 9 | 153.2 t | 148.6 t |
| 10 | 169.0 t | 165.1 t |





| Número de ra- mal | Capacidad máxima de carga (DIN EN 13000) | Capacidad máxima de carga (ASME B30.5) |
|----------------------|--|---|
| 11 | 184.5 t | 181.7 t |
| 12 | 199.9 t | 198.2 t |
| 13 | 214.9 t | 214.7 t |

3.2 ASME B30.5-Tabla de cable de elevación-Tipo 2

| Número de ra- mal | Capacidad máxima de carga (DIN EN 13000) | Capacidad máxima de carga (ASME B30.5) |
|----------------------|--|---|
| 1 | 12.6 t | 11.5 t |
| 2 | 24.9 t | 22.9 t |
| 3 | 37.1 t | 34.4 t |
| 4 | 49.1 t | 45.9 t |
| 5 | 60.9 t | 57.3 t |
| 6 | 72.5 t | 68.8 t |
| 7 | 84.0 t | 80.3 t |
| 8 | 95.3 t | 91.7 t |
| 9 | 106.4 t | 103.2 t |
| 10 | 117.4 t | 114.7 t |
| 11 | 128.2 t | 126.1 t |
| 12 | 138.8 t | 137.6 t |
| 13 | 149.3 t | 149.1 t |

3.3 ASME B30.5-Tabla de cable de elevación-Tipo 3

| Número de ra- mal | Capacidad máxima de carga (DIN EN 13000) | Capacidad máxima de carga (ASME B30.5) |
|----------------------|--|---|
| 1 | 16.1 t | 14.7 t |
| 2 | 31.9 t | 29.4 t |
| 3 | 47.5 t | 44.0 t |
| 4 | 62.8 t | 58.7 t |
| 5 | 78.0 t | 73.4 t |
| 6 | 92.8 t | 88.1 t |
| 7 | 107.5 t | 102.8 t |
| 8 | 122.0 t | 117.4 t |
| 9 | 136.2 t | 132.1 t |
| 10 | 150.2 t | 146.8 t |

| Número de ra- mal | Capacidad máxima de carga (DIN EN 13000) | Capacidad máxima de carga (ASME B30.5) |
|----------------------|--|---|
| 11 | 164.0 t | 161.5 t |
| 12 | 177.6 t | 176.1 t |
| 13 | 191.0 t | 190.8 t |

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Fig.195219

1 Peso mínimo requerido del motón de gancho



ADVERTENCIA

¡Peligro que los componentes y el motón de gancho se caigan!

En el caso de un peso del motón de gancho muy bajo, el cable de elevación entre el cabezal de pluma y el cabrestante puede tirar bruscamente hacia arriba el motón de gancho a partir de una cierta altura de elevación. El cabezal de la pluma y el motón de gancho pueden dañarse. Las piezas dañadas y el cable de elevación pueden caerse.

¡Si al desenrollar el cabrestante, se forma un cable flojo entre el cabrestante y el cabezal de pluma, el motón de gancho puede caerse repentinamente.

¡Las personas pueden morir o lesionarse gravemente!

¡Se pueden ocasionar grandes daños materiales!

- Calcular el peso mínimo requerido del motón de gancho antes de elevar la carga.
- ▶ Seleccionar el peso del motón de gancho dependiendo del cálculo.
- Está prohibido que el cable se quede flojo.

Si el peso del motón de gancho es muy bajo:

Seleccionar el motón de gancho más pesado o el peso del motón de gancho con peso adicional o aumentar el set de modificación técnica.

AVISO

¡Existe peligro de dañar el cable si el peso del motón de gancho es insuficiente!

Si para el modo de servicio no se requiere ningún número de ramal mínimo de cable de elevación que dependa del sistema:

Colocar el motón de gancho dependiendo del peso de la carga elevada mínima.

Si se incorporan cargas en grandes alturas:

▶ Si es posible, efectuar una colocación de cable más alta.

Si se efectúa una colocación de cable más alta:

► Aumentar el peso del motón de gancho.

Si el peso del motón de gancho es muy bajo:

Seleccionar el motón de gancho más pesado o el peso del motón de gancho con peso adicional o aumentar el set de modificación técnica.



Nota

Tener en cuenta las siguientes indicaciones:

Si la capacidad de carga máxima de la configuración de la pluma no se sobrepasa por un aumento adicional del peso del motón de gancho:

▶ Aumentar el peso mínimo requerido del motón de gancho un 10 por ciento como mínimo.

Para reducir el desgaste del cable de elevación:

➤ Si la longitud del cable presente disponible y el peso máximo permitido del motón de gancho lo permitan, efectuar una colocación del cable más alta. Especialmente cuando las cargas se incorporan a gran altura.

Ya que el peso del cable de elevación se ha contemplado en las tablas de cargas en el caso de una colocación del cable mínima y con un radio mínimo sólo hasta la superficie de alzamiento de la grúa:

▶ Al colocar el cable más alto o al descender el motón de gancho bajo la superficie de alzamiento de la grúa, el peso adicional del cable de elevación tiene que ser sacado de la capacidad máxima de carga.



Nota

¡Observar los pesos del motón de gancho autorizados para el levantamiento y descenso del sistema de pluma!

Si aumentando el peso propio del motón de gancho, se sobrepasa el peso del motón de gancho autorizado para el levantamiento y descenso del sistema de pluma, el sistema de pluma no puede subir ni bajar con dicho peso del motón de gancho.

Observar los pesos de motón de gancho autorizados para levantar y bajar tal como está indicado en las tablas de levantamiento y descenso.

Si el peso autorizado del motón de gancho se sobrepasa para el levantamiento y descenso:

▶ Desmontar los pesos adicionales para el levantamiento y descenso del sistema de pluma.

2 Cálculo del peso mínimo requerido del motón de gancho

| Fórmula |
|-------------------|
| G = L x M x n x F |

Fórmula para calcular el peso mínimo requerido del motón de gancho

| Abreviación | Denominación | Unidad |
|-------------|---|--------|
| G | Peso mínimo requerido del motón de gancho | kg |
| L | Longitud total de la pluma | m |
| M | Peso de cable | kg/m |
| N | Número de ramal | - |
| F | Factor | - |

Explicación de las variables para calcular el peso mínimo requerido del motón de gancho

2.1 Cálculo del peso de cable por el diámetro de cable

| Diámetro de cable | Peso de cable M |
|-------------------|-----------------|
| 13 mm | 0.85 kg/m |
| 15 mm | 1.12 kg/m |
| 17 mm | 1.45 kg/m |
| 19 mm | 1.81 kg/m |
| 21 mm | 2.24 kg/m |
| 23 mm | 2.67 kg/m |
| 25 mm | 3.09 kg/m |
| 28 mm | 3.94 kg/m |
| 30 mm | 4.46 kg/m |
| 32 mm | 5.09 kg/m |

Peso de cable M

2.2 Cálculo del factor por el número de cable

Diámetro de cable

| Número de ramal de cable n | Factor F |
|----------------------------|----------|
| 1 | 1.31 |
| 2 | 1.34 |
| 3 | 1.36 |
| 4 | 1.39 |
| 5 | 1.41 |
| 6 | 1.44 |
| 7 | 1.46 |
| 8 | 1.49 |
| 9 | 1.52 |
| 10 | 1.54 |
| 11 | 1.57 |
| 12 | 1.60 |
| 13 | 1.63 |
| 14 | 1.65 |
| 15 | 1.68 |
| 16 | 1.71 |
| 17 | 1.74 |
| 18 | 1.77 |
| 19 | 1.80 |
| 20 | 1.83 |
| 21 | 1.87 |
| 22 | 1.90 |
| 23 | 1.93 |
| 24 | 1.96 |
| 25 | 2.00 |
| 26 | 2.03 |
| 27 | 2.06 |
| 28 | 2.10 |
| 29 | 2.13 |
| 30 | 2.17 |

Número de ramal y factor



2.3 Ejemplo de cálculo para servicio de la grúa con 1 cabrestante de cable de elevación en el servicio simple

Configuración de la grúa:

- Longitud de la pluma principal: 70 mLongitud de la pluma adicional: 28 m
- Diámetro de cable: 28 mm
- Número de ramal de cable: 12 ramales

Variables para el cálculo:

L = Longitud total de la pluma = 98 m

M = Peso de cable para el diámetro de cable 28 mm = 3.94 kg/m

n = Número de ramal de cable = 12

F = Factor para 12 ramales = 1.60

Cálculo:

 $G = L \times M \times N \times F$

G = 98 m x 3.94 kg/m x 12 x 1.60

G = 7414 kg

El peso mínimo requerido de motón de gancho debe ser de 7414 kg y aumentarse adicionalmente de 10 por ciento (741 kg) a 8155 kg. Por el aumento adicional de peso del motón de gancho no se puede sobrepasar la capacidad de carga máxima en la configuración respectiva de la pluma.

2.4 Ejemplo de cálculo para servicio de la grúa con 2 cabrestantes de cable de elevación en servicio paralelo

Configuración de la grúa:

- Longitud de la pluma principal: 70 m
- Longitud de la pluma adicional: 28 m
- Diámetro de cable: 28 mm
- Número de ramal de cable: 2 x 8 ramales

Variables para el cálculo:

L = Longitud total de la pluma = 98 m

M = Peso de cable para el diámetro de cable 28 mm = 3.94 kg/m

n = Número de ramal = (2×8)

F = Factor para 8 ramales = 1.49

Cálculo:

 $G = L \times M \times (2 \times N) \times F$

G = 98 m x 3.94 kg/m x (2 x 8) x 1.49

G = 9205 kg

El peso mínimo requerido de motón de gancho tiene que ser de 9205 kg y aumentarse adicionalmente un 10 por ciento como mínimo (921 kg) a 10126 kg. Por el aumento adicional de peso del motón de gancho no se puede sobrepasar la capacidad de carga máxima en la configuración respectiva de la pluma.

3 Procedimiento con el cable flojo



Nota

▶ ¡Si el motón de gancho ya no puede descender porque el cable se ha aflojado, se debe proceder de la manera siguiente!.



3.1 Enrollado del cable de elevación aflojado

► Enrollar cuidadosamente en el cabrestante, el cable de elevación aflojado que está entre el cabezal de pluma y el cabrestante.



Nota

▶ ¡Se debe quedar un poco de comba entre el cabezal de pluma y el cabrestante!

3.2 Descender pluma

AVISO

¡Peligro de colisión!

Al bajar la pluma, el largo del cable de elevación puede reducirse y tirar del motón de gancho contra el cabezal de pluma.

- ▶ Observar la distancia entre el motón de gancho y el cabezal de pluma
- ► Bajar la pluma cuidadosamente.

Resultado:

- El cable de elevación entre el cabezal de pluma y el cabrestante se ha tensado.

3.3 Descenso del motón de gancho

▶ Bajar cuidadosamente el motón de gancho con el mecanismo de elevación.



Fig.195219

1 El servicio de la grúa con 1 cable de elevación F= 180 kN y d=28 mm (tipo1)



Nota

► El largo total de pluma puede estar limitado dependiendo del número de ramales y del peso del motón de gancho. La base de los valores indicados son los datos específicos de la grúa.

| Datos específicos de la grúa | | | | | | |
|---|-------------|--|--|--|--|--|
| Diámetro de cable | 28.0 mm | | | | | |
| Peso de cable | 0.00394 t/m | | | | | |
| Partes de la pluma | 6 m | | | | | |
| Longitud mínima de la pluma | 24 m | | | | | |
| Longitud máxima de la pluma | 192 m | | | | | |
| Cantidad de cabrestantes de elevación | 1 | | | | | |
| Largo de cable de elevación | 1050 m | | | | | |
| Derrick hasta la inversión del cable de elevación | 31.0 m | | | | | |

1.1 Gancho de carga 16 E (0 poleas / 16.0 t capacidad de carga)

| Número de ra- mal | Largo de pluma total máximo posible con el siguiente peso de motón de gan- cho: | | | | |
|----------------------|--|--|--|--|--|
| | 1.1 t sin peso adi- cional | | | | |
| 1 | 192 m | | | | |

1.2 Motón de gancho 50 E (1 polea / 50.0 t capacidad de carga)

| Número de ra- mal | Largo de pluma total máximo posible con el siguiente peso de motón de gan- cho: | | | | |
|----------------------|--|---------------------------------------|---------------------------------------|--|--|
| | 1.0 t sin peso adi- cional | 2.0 t con 2 pesos adi- cionales | 3.0 t con 4 pesos adi- cionales | | |
| 3 | 60 m | 120 m | 186 m | | |
| 2 | 90 m | 186 m | 192 m | | |
| 1 | 192 m | 192 m | 192 m | | |

1.3 Motón de gancho 125 DM (3 poleas / 121.0 t capacidad de carga)

| Número de ra- mal | Largo de pluma total máximo posible con el siguiente peso de motón de gan- cho: | | | | | |
|----------------------|--|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|--|
| | 1.5 t sin peso adi- cional | 2.5 t con 2 pesos adi- cionales | 3.5 t con 4 pesos adi- cionales | 4.5 t con 6 pesos adi- cionales | 5.5 t con 8 pesos adi- cionales | |
| 7 | 36 m | 60 m | 84 m | 108 m | 120 m | |
| 6 | 42 m | 72 m | 102 m | 132 m | 138 m | |
| 5 | 48 m | 84 m | 120 m | 156 m | 162 m | |
| 4 | 66 m | 114 m | 156 m | 192 m | 192 m | |
| 3 | 90 m | 150 m | 192 m | 192 m | 192 m | |
| 2 | 138 m | 192 m | 192 m | 192 m | 192 m | |
| 1 | 192 m | 192 m | 192 m | 192 m | 192 m | |

1.4 Motón de gancho 200 DM (5 poleas / 184.5 t capacidad de carga)

| Número de ra- mal | Largo de pluma total máximo posible con el siguiente peso de motón de gan- cho: | | | | | |
|----------------------|--|---------------------------------------|------------------------------------|---------------------------------------|------------------------------------|-------------------------------------|
| | 2.0 t sin peso adi- cional | 3.0 t con 2 pesos adi- cionales | 4.0 t con 4 pesos adi- cionales | 5.0 t con 6 pesos adi- cionales | 6.0 t con 8 pesos adi- cionales | 7.0 t con 10 pesos adi- cionales |
| 11 | 24 m | 42 m | 54 m | 72 m | 78 m | 78 m |
| 10 | 30 m | 48 m | 60 m | 78 m | 84 m | 84 m |
| 9 | 36 m | 54 m | 72 m | 90 m | 96 m | 96 m |
| 8 | 42 m | 60 m | 84 m | 102 m | 108 m | 108 m |
| 7 | 48 m | 72 m | 96 m | 120 m | 120 m | 120 m |
| 6 | 54 m | 84 m | 114 m | 138 m | 138 m | 138 m |
| 5 | 66 m | 102 m | 138 m | 162 m | 162 m | 162 m |
| 4 | 90 m | 132 m | 180 m | 192 m | 192 m | 192 m |
| 3 | 120 m | 186 m | 192 m | 192 m | 192 m | 192 m |
| 2 | 186 m | 192 m | 192 m | 192 m | 192 m | 192 m |
| 1 | 192 m | 192 m | 192 m | 192 m | 192 m | 192 m |

1.5 Motón de gancho doble 400 - 200 DMZ (5 poleas / 184.5 t capacidad de carga)

| Número de ra- mal | Largo de pluma total máximo posible con el siguiente peso de motón de gan- cho: | | | | |
|----------------------|--|---------------------------------------|------------------------------------|--|--|
| | 5.0 t sin peso adi- cional | 6.0 t con 2 pesos adi- cionales | 7.0 t con 4 pesos adi- cionales | | |
| 11 | 72 m | 78 m | 78 m | | |
| 10 | 78 m | 84 m | 84 m | | |
| 9 | 90 m | 96 m | 96 m | | |
| 8 | 102 m | 108 m | 108 m | | |
| 7 | 120 m | 120 m | 120 m | | |
| 6 | 138 m | 138 m | 138 m | | |
| 5 | 162 m | 162 m | 162 m | | |
| 4 | 192 m | 192 m | 192 m | | |
| 3 | 192 m | 192 m | 192 m | | |
| 2 | 192 m | 192 m | 192 m | | |
| 1 | 192 m | 192 m | 192 m | | |

1.6 Motón de gancho doble 600 - 300 DMZ (9 poleas / 300.0 t capacidad de carga)

| Número de ra- mal | Largo de pluma total máximo posible con el siguiente peso de motón de gan- cho: | | | | |
|----------------------|--|--|--|--|--|
| | 8.5 t sin peso adi- cional | | | | |
| 19 | 48 m | | | | |
| 18 | 48 m | | | | |
| 17 | 54 m | | | | |
| 16 | 54 m | | | | |
| 15 | 60 m | | | | |
| 14 | 60 m | | | | |
| 13 | 66 m | | | | |
| 12 | 72 m | | | | |
| 11 | 78 m | | | | |
| 10 | 84 m | | | | |
| 9 | 96 m | | | | |
| 8 | 108 m | | | | |
| 7 | 120 m | | | | |
| 6 | 138 m | | | | |

| Número de ra- mal | Largo de pluma total máximo posible con el siguiente peso de motón de gan- cho: | | | | |
|----------------------|--|--|--|--|--|
| | 8.5 t sin peso adi- cional | | | | |
| 5 | 162 m | | | | |
| 4 | 192 m | | | | |
| 3 | 192 m | | | | |
| 2 | 192 m | | | | |
| 1 | 192 m | | | | |

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1 El servicio de la grúa con 2 cable de elevación F= 180 kN y d=28 mm (tipo1)



Nota

► El largo total de pluma puede estar limitado dependiendo del número de ramales y del peso del motón de gancho. La base de los valores indicados son los datos específicos de la grúa.

| Datos específicos de la grúa | | | | | |
|---|-------------|--|--|--|--|
| Diámetro de cable | 28.0 mm | | | | |
| Peso de cable | 0.00394 t/m | | | | |
| Partes de la pluma | 6 m | | | | |
| Longitud mínima de la pluma | 24 m | | | | |
| Longitud máxima de la pluma | 192 m | | | | |
| Cantidad de cabrestantes de elevación | 2 | | | | |
| Largo de cable de elevación | 1050 m | | | | |
| Derrick hasta la inversión del cable de elevación | 31.0 m | | | | |

1.1 Motón de gancho doble 400 - 200 DMZ (2 x 5 poleas / 369.0 t capacidad de carga)

| Número de ra- mal | Largo de pluma total máximo posible con el siguiente peso de motón de gan- cho: | | | | | |
|----------------------|--|---------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|
| | 6.0 t sin peso adi- cional | 7.0 t con 2 pesos adi- cionales | 8.0 t con 4 pesos adi- cionales | 9.0 t con 6 pesos adi- cionales | 10.0 t con 8 pesos adi- cionales | 11.0 t con 10 pesos adicionales |
| 2 x 11 | 42 m | 48 m | 54 m | 66 m | 72 m | 78 m |
| 2 x 10 | 48 m | 54 m | 60 m | 72 m | 78 m | 84 m |
| 2 x 9 | 54 m | 60 m | 72 m | 78 m | 90 m | 96 m |
| 2 x 8 | 60 m | 72 m | 84 m | 90 m | 102 m | 108 m |
| 2 x 7 | 72 m | 84 m | 96 m | 108 m | 120 m | 120 m |
| 2 x 6 | 84 m | 102 m | 114 m | 132 m | 138 m | 138 m |

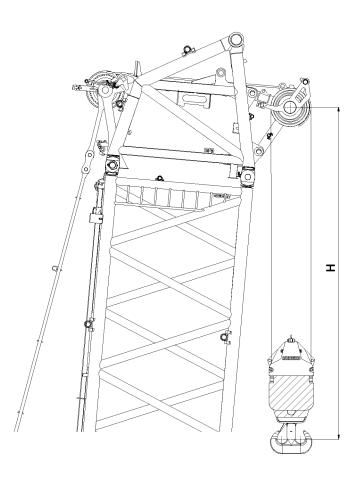
1.2 Motón de gancho doble 600 - 300 DMZ (2 x 9 poleas / 600.0 t capacidad de carga)

| Número de ra- mal | Largo de pluma total máximo posible con el siguiente peso de motón de gan- cho: | | | | | |
|----------------------|--|------|------|------|------|--------------------|
| | 11.0 t sin peso adipeso adicionales 12.0 t con 2 pesos adipesos adicionales 13.0 t con 4 pesos adipesos adicionales 14.0 t con 6 pesos adipesos adicionales 15.0 t con 8 pesos adipesos adicionales 16.0 t con 8 pesos adicionales 10 pesos adic | | | | | |
| 2 x 19 | 36 m | 42 m | 48 m | 48 m | 48 m | 54 m ¹⁾ |
| 2 x 18 | 42 m | 42 m | 48 m | 48 m | 48 m | 54 m ¹⁾ |
| 2 x 17 | 42 m | 48 m | 54 m | 54 m | 54 m | 60 m ¹⁾ |



¹⁾ El motón de gancho no alcanza el suelo debido al largo del cable de elevación.

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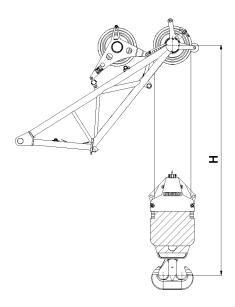


Fig.115552: Distancia entre el gancho y el juego de rodillos en el cabezal de la pluma

1 Distancia entre el gancho y el juego de rodillos en el cabezal de la pluma

Para determinar la altura del gancho, se deberá sustraer la altura de elevación menos la distancia que existe entre el gancho y el centro del juego de rodillos del cabezal de la pluma.

Las distancias para el motón de gancho utilizado pueden verse en la tabla a continuación.

| Motón de gancho | | Distancia H | |
|--|-------------------------|--------------------------|---------------------|
| | Extensión cabezal SW | Cabezal de conexión W | Extensión cabezal F |
| Gancho de carga 16 E | 4.4 m | 4.4 m | 5.0 m |
| Motón de gancho 50 EM | 4.9 m | 4.9 m | 5.6 m |
| Motón de gancho 125 DM | 5.1 m | 5.1 m | 5.7 m |
| Motón de gancho 200 DM | 5.2 m | 5.2 m | 5.8 m |
| Motón de gancho doble 400 / 200 DMZ | 6.2 m | 6.2 m | - |
| Motón de gancho doble 600 / 300 DMZ | 6.7 m | 6.7 m | - |

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Fig.195219



1 Ramales mínimos del cable de elevación y pesos mínimos del motón de gancho



Nota

- ▶ Para un servicio seguro de la grúa se tiene que controlar si los ramales mínimos del cable de elevación y el peso mínimo del motón de gancho son necesarios.
- ▶ Para determinar las colocaciones mínimas del cable de elevación se deben tener en cuenta cuatro criterios límite.
- ▶ En las siguientes secciones se describen los criterios limitadores.

Se deben tener en cuenta los siguientes criterios:

- Tracción máxima del cable (n_{min [tabla de colocación de cable]})
- Terrenos estáticos ($n_{min [estática]}$), ($G_{min [estática]}$)
- Peso de carga seguro del controlador de cargas LICCON (n_{min foeso de la carga})
- Servicio paralelo (n_{min [servicio paralelo]})

1.1 Criterio limitador: Tracción máxima del cable

No se deben superar las tracciones máximas del cable. Igualmente se debe seleccionar de la "Tabla de colocación del cable de elevación" los ramales mínimos del cable de elevación en función de la capacidad de carga de elevación, véase el cuaderno de tablas de cargas capítulo 40.90.

1.2 Criterio limitador: Terrenos estáticos



Nota

Valores mínimos que impiden movimientos incontrolables de la pluma hacia atrás en posiciones empinadas.

1.2.1 Ramales mínimos de cable servicio SW, SDW, SDWV

TAB 181 00 027-00



ADVERTENCIA

Ramales mínimos del cable de elevación y peso mínimo del motón de gancho no cumplidos Peligro de vuelco de la grúa, fallo de las estructuras de la grúa.

Muerte o lesiones graves, altos daños materiales.

Cumplir con los ramales mínimos del cable de elevación y peso mínimo del motón de gancho en función del ángulo de la pluma principal, véase la tabla siguiente.



ADVERTENCIA

Ramales mínimos del cable de elevación no cumplidos

Peligro de vuelco de la grúa, fallo de las estructuras de la grúa.

Muerte o lesiones graves, altos daños materiales.

Si la polea de ramal simple está montada en la punta en celosía basculable W- 12 m:

► Encajar la polea de ramal simple al menos 2 veces.



Nota

- ▶ El ángulo de la pluma principal designa la inclinación de ésta con relación a la horizontal.
- ▶ Los valores indicados en la tabla son también válidos de manera general para el servicio con la polea de ramal simple.
- ▶ Los números de ramal mínimo de cable de elevación son válidos para el servicio con 1 cabrestante de cable de elevación y para el servicio con 2 cabrestantes de cable de elevación.

Ejemplo para 6 ramales mínimos del cable de elevación:





1 cabrestante de cable de elevación: 1 x 6 ramales de cable 2 cabrestantes de cable de elevación: 2 x 3 ramales de cable

| Plu | ma | Ramales míni- mos del cable de elevación | | |
|-----------|------------|--|-----------------------------------|-----------------------------------|
| S | w | | Ángulo pluma princi- pal > 70° | Ángulo pluma princi- pal < 70° |
| S- 36 m | W- 12 m 1) | 8 | 3.0 t | - |
| 3- 30 111 | W- 18 m 1) | 4 | 2.0 t | - |
| S- 42 m | W- 12 m 1) | 8 | 3.0 t | - |
| 3- 42 111 | W- 18 m 1) | 4 | 2.0 t | - |
| S- 48 m | W- 12 m 1) | 10 | 4.0 t | - |
| 3- 40 111 | W- 18 m 1) | 4 | 4.0 t | - |
| S- 54 m | W- 12 m 1) | 10 | 7.0 t | 4.0 t |
| 3- 54 111 | W- 18 m 1) | 4 | 4.0 t | - |
| | W- 12 m 1) | 12 | 8.0 t | 6.0 t |
| S- 60 m | W- 18 m 1) | 4 | 5.0 t | - |
| | W- 24 m | 4 | 2.0 t | - |
| | W- 12 m 1) | 14 | 9.0 t | 7.0 t |
| S- 66 m | W- 18 m 1) | 6 | 6.0 t | - |
| 3- 00 111 | W- 24 m | 4 | 3.5 t | - |
| | W- 30 m | 4 | 3.5 t | - |
| | W- 12 m 1) | 16 | 11.0 t | 9.0 t |
| C 72 m | W- 18 m 1) | 6 | 7.0 t | 4.0 t |
| S- 72 m | W- 24 m | 4 | 5.0 t | - |
| | W- 30 m | 4 | 5.0 t | - |
| | W- 12 m 1) | 14 | 13.0 t | 10.0 t |
| | W- 18 m 1) | 8 | 8.0 t | 5.0 t |
| S- 78 m | W- 24 m | 6 | 5.0 t | - |
| | W- 30 m | 6 | 5.0 t | - |
| | W- 36 m | 4 | 3.0 t | - |
| | W- 12 m 1) | 12 | 16.0 t | 12.0 t |
| | W- 18 m 1) | 10 | 10.0 t | 6.0 t |
| S- 84 m | W- 24 m | 6 | 7.0 t | 4.0 t |
| | W- 30 m | 6 | 7.0 t | - |
| | W- 36 m | 4 | 3.0 t | - |



1.2.2 Ramales mínimos del cable de elevación servicio SLF, SL3F

TAB 181 00 047-00



ADVERTENCIA

Ramales mínimos del cable de elevación y peso mínimo del motón de gancho no cumplidos Peligro de vuelco de la grúa, fallo de las estructuras de la grúa.

Muerte o lesiones graves, altos daños materiales.

- ► Cumplir con los ramales mínimos del cable de elevación y peso mínimo del motón de gancho dentro del rango angular de la pluma principal indicado, véase la tabla siguiente.
- ► El motón de gancho puede bajarse sólo por debajo del rango angular indicado de la pluma principal.

¹⁾ Las puntas en celosía basculables son válidas sólo para el servicio SDWV.

| Pluma | | Ramales míni- mos del cable de elevación | Peso mínimo del motón de gancho | | ar de la pluma cipal |
|------------|---------------|--|---------------------------------------|-------|-------------------------|
| SL | F | | | desde | hasta |
| | F- 12 m / 11° | 7 | 2.5 t | 75° | 87° |
| SL- 54 m | F- 12 m / 11° | 6 | 3.0 t | 75° | 87° |
| hasta | F- 12 m / 11° | 5 | 3.5 t | 75° | 87° |
| SL3- 108 m | F- 12 m / 11° | 4 | 4.0 t | 75° | 87° |
| | F- 12 m / 16° | 3 | 1.5 t | 75° | 87° |

1.2.3 Ramales mínimos del cable de elevación servicio SL10DFB; SL10DFB2

TAB 181 00 191-00



ADVERTENCIA

Ramales mínimos del cable de elevación y peso mínimo del motón de gancho no cumplidos Peligro de vuelco de la grúa, fallo de las estructuras de la grúa.

Muerte o lesiones graves, altos daños materiales.

► Cumplir con los ramales mínimos del cable de elevación y peso mínimo del motón de gancho, véase la tabla siguiente.

| Pluma | | Ramales mínimos del cable de elevación | Peso mínimo del mo- tón de gancho |
|-------------------|---------------|--|--------------------------------------|
| SL | F | | |
| SL10- 102 m | F- 12 m / 11° | 5 | 6.0 t |
| hasta SL10- 153 m | F- 12 m / 16° | 4 | 3.0 t |

1.2.4 Ramales mínimos del cable de elevación servicio SL2DFB; SL4DFB; SL2DFBW; SL4DFBW; SL2DFB2; SL4DFB2

TAB 181 00 192-01



ADVERTENCIA

Ramales mínimos del cable de elevación y peso mínimo del motón de gancho no cumplidos Peligro de vuelco de la grúa, fallo de las estructuras de la grúa.

Muerte o lesiones graves, altos daños materiales.

Cumplir con los ramales mínimos del cable de elevación y peso mínimo del motón de gancho, véase la tabla siguiente.

| Pluma | | Ramales mínimos del cable de elevación | Peso mínimo del mo- tón de gancho |
|-----------------|---------------|--|--------------------------------------|
| SL | F | | |
| | F- 12 m / 11° | 5 | 6.0 t |
| SL- 72 m | F- 12 m / 16° | 4 | 3.0 t |
| hasta SL- 138 m | F- 18 m / 13° | 4 | 2.0 t |
| | F- 18 m / 18° | 4 | 2.0 t |

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1.2.5 Ramales mínimos del cable de elevación servicio HSL2DFB; HSL4DFB; HSL2DFBW; HSL4DFBW; HSL2DFB2; HSL4DFB2

TAB 181 00 319-00



ADVERTENCIA

Ramales mínimos del cable de elevación y peso mínimo del motón de gancho no cumplidos Peligro de vuelco de la grúa, fallo de las estructuras de la grúa.

Muerte o lesiones graves, altos daños materiales.

Cumplir con los ramales mínimos del cable de elevación y peso mínimo del motón de gancho, véase la tabla siguiente.

| Pluma | | Ramales mínimos del cable de elevación | Peso mínimo del mo- tón de gancho |
|------------------|---------------|--|--------------------------------------|
| HSL | F | | |
| | F- 12 m / 11° | 5 | 6.0 t |
| HSL- 72 m | F- 12 m / 16° | 4 | 3.0 t |
| hasta HSL- 138 m | F- 18 m / 13° | 4 | 2.0 t |
| | F- 18 m / 18° | 4 | 2.0 t |

1.2.6 Ramales mínimos del cable de elevación servicio SL13DFB; SL13DFB2

TAB 181 00 340-00



ADVERTENCIA

Ramales mínimos del cable de elevación y peso mínimo del motón de gancho no cumplidos Peligro de vuelco de la grúa, fallo de las estructuras de la grúa.

Muerte o lesiones graves, altos daños materiales.

► Cumplir con los ramales mínimos del cable de elevación y peso mínimo del motón de gancho, véase la tabla siguiente.

| Pluma | | Ramales mínimos del cable de elevación | Peso mínimo del mo- tón de gancho |
|-------------------|---------------|--|--------------------------------------|
| SL | F | | |
| SL13- 102 m | F- 12 m / 11° | 5 | 6.0 t |
| hasta SL13- 156 m | F- 12 m / 16° | 4 | 3.0 t |

1.2.7 Ramales mínimos del cable de elevación servicio HSDW; HSDWB; HSDWB2; HSDWVBW; HSDWVB; HSDWVBW

TAB 181 00 343-00



ADVERTENCIA

Ramales mínimos del cable de elevación y peso mínimo del motón de gancho no cumplidos Peligro de vuelco de la grúa, fallo de las estructuras de la grúa.

Muerte o lesiones graves, altos daños materiales.

► Cumplir con los ramales mínimos del cable de elevación y peso mínimo del motón de gancho en función del ángulo de la pluma principal, véase la tabla siguiente.



ADVERTENCIA

Ramales mínimos del cable de elevación no cumplidos Peligro de vuelco de la grúa, fallo de las estructuras de la grúa.

Muerte o lesiones graves, altos daños materiales.

Si la polea de ramal simple está montada en la punta en celosía basculable W- 12 m:

► Encajar la polea de ramal simple al menos 2 veces.



Nota

- ▶ El ángulo de la pluma principal designa la inclinación de ésta con relación a la horizontal.
- ▶ Los valores indicados en la tabla son también válidos de manera general para el servicio con la polea de ramal simple.
- ► Los números de ramal mínimo de cable de elevación son válidos para el servicio con 1 cabrestante de cable de elevación y para el servicio con 2 cabrestantes de cable de elevación.

Ejemplo para 6 ramales mínimos del cable de elevación:

1 cabrestante de cable de elevación: 1 x 6 ramales de cable

2 cabrestantes de cable de elevación: 2 x 3 ramales de cable

| Pluma | | Ramales míni- mos del cable de elevación | Peso mínimo del motón de gancho | |
|-------------|-----------------------|--|-----------------------------------|-----------------------------------|
| HS | W | | Ángulo pluma princi- pal > 70° | Ángulo pluma princi- pal < 70° |
| HS- 36 m | W- 12 m ²⁾ | 8 | 3.0 t | - |
| 113-30111 | W- 18 m ²⁾ | 4 | 2.0 t | - |
| HS- 42 m | W- 12 m ²⁾ | 8 | 3.0 t | - |
| 113- 42 111 | W- 18 m ²⁾ | 4 | 2.0 t | - |
| HS- 48 m | W- 12 m ²⁾ | 10 | 4.0 t | - |
| П3- 40 III | W- 18 m ²⁾ | 4 | 4.0 t | - |
| HS- 54 m | W- 12 m ²⁾ | 10 | 7.0 t | 4.0 t |
| ПЗ- 34 III | W- 18 m ²⁾ | 4 | 4.0 t | - |
| | W- 12 m ²⁾ | 12 | 8.0 t | 6.0 t |
| HS- 60 m | W- 18 m ²⁾ | 4 | 5.0 t | - |
| | W- 24 m | 4 | 2.0 t | - |
| | W- 12 m ²⁾ | 14 | 9.0 t | 7.0 t |
| HS- 66 m | W- 18 m ²⁾ | 6 | 6.0 t | - |
| H3- 00 III | W- 24 m | 4 | 3.5 t | - |
| | W- 30 m | 4 | 3.5 t | - |
| HS- 72 m | W- 12 m ²⁾ | 16 | 11.0 t | 9.0 t |
| | W- 18 m ²⁾ | 6 | 7.0 t | 4.0 t |
| | W- 24 m | 4 | 5.0 t | - |
| | W- 30 m | 4 | 5.0 t | - |



Ramales míni-

mos del cable de elevación

Pluma

Peso mínimo del motón de gancho

²⁾ Las puntas en celosía basculables son válidas sólo para el servicio HSDWV.

1.3 Criterio limitador: Peso de carga seguro del controlador de cargas LICCON



Nota

- ► La exactitud de peso del controlador de cargas LICCON es demasiado baja para una medición precisa en el caso de ramales de cable de elevación pequeños y posiciones de pluma empinadas.
- ► El número de ramales mínimo del cable de elevación indicado en las tablas garantiza que la grúa, especialmente en posiciones de pluma empinadas más de 60° respecto a la horizontal, no se sobrecargará de modo inadvertido.



ADVERTENCIA

Ramales mínimos del cable de elevación no cumplidos

Peligro de vuelco de la grúa, fallo de las estructuras de la grúa.

Muerte o lesiones graves, altos daños materiales.

► Cumplir los ramales mínimos del cable de elevación en la pluma en la que está elevada la carga conforme a las siguientes tablas.

1.3.1 Ramales mínimos del cable de elevación en la pluma principal, carga en la pluma principal

Modos de servicio sin Derrick

| Modo de servicio | Pluma principal larga | Ramales mínimos del cable de elevación | |
|------------------|-----------------------|--|-------------------|
| | | Servicio simple | Servicio paralelo |
| | 24 m | 7 | 2 x 8 |
| | 30 m | 7 | 2 x 8 |
| | 36 m | 6 | 2 x 6 |
| | 42 m | 5 | 2 x 6 |
| | 48 m | 5 | 2 x 6 |
| | 54 m | 5 | 2 x 6 |
| S | 60 m | 4 | 2 x 6 |
| HS | 66 m | 4 | - |
| | 72 m | 4 | - |
| | 78 m | 3 | - |
| | 84 m | 3 | - |
| | 90 m | 3 | - |
| | 96 m | 3 | - |
| | 102 m | 3 | - |
| | 108 m | 3 | - |

Modos de servicio con Derrick





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| Modo de servicio | Pluma principal larga | Ramales mínimos del cable de elevación | | |
|------------------|-----------------------|--|-------------------|--|
| | | Servicio simple | Servicio paralelo | |
| | 36 m | 13 | 2 x 14 | |
| | 42 m | 14 | 2 x 14 | |
| | 48 m | 12 | 2 x 12 | |
| | 54 m | 10 | 2 x 10 | |
| | 60 m | 8 | 2 x 10 | |
| | 66 m | 7 | 2 x 8 | |
| | 72 m | 6 | 2 x 8 | |
| | 78 m | 6 | 2 x 6 | |
| SD | 84 m | 5 | 2 x 6 | |
| HSD | 90 m | 5 | 2 x 6 | |
| | 96 m | 4 | 2 x 6 | |
| | 102 m | 4 | - | |
| • | 108 m | 4 | - | |
| | 114 m | 4 | - | |
| | 120 m | 3 | - | |
| | 126 m | 3 | - | |
| | 132 m | 3 | - | |
| | 138 m | 3 | - | |
| | 144 m | 3 | - | |

1.3.2 Ramales mínimos del cable de elevación en la punta en celosía basculable (WV), carga en la punta en celosía basculable (WV)

| Modo de servicio | Longitud de la punta en celosía basculable | Ramales mínimos del cable de elevación | |
|------------------|--|--|-------------------|
| | | Servicio simple | Servicio paralelo |
| | 12 m | 5 | 2 x 6 |
| | 18 m | 5 | 2 x 6 |
| | 24 m | 4 | 2 x 6 |
| | 30 m | 4 | - |
| | 36 m | 3 | - |
| | 42 m | 3 | - |
| | 48 m | 3 | - |
| WV | 54 m | 2 | - |
| | 60 m | 2 | - |
| | 66 m | 2 | - |
| | 72 m | 2 | - |
| | 78 m | 2 | - |



| Modo de servicio | Longitud de la punta en celosía basculable | Ramales mínimos del cable de elevación | | |
|------------------|--|--|-------------------|--|
| | | Servicio simple | Servicio paralelo | |
| | 84 m | 2 | - | |
| | 90 m | 2 | - | |
| | 96 m | 2 | - | |

1.3.3 Ramales mínimos del cable de elevación en la punta en celosía basculable (W), carga en la punta en celosía basculable (W)

| Modo de servicio | Longitud de la punta en celosía basculable | Ramales mínimos del cable de elevación | | |
|------------------|--|--|-------------------|--|
| | | Servicio simple | Servicio paralelo | |
| | 24 m | 5 | 2 x 6 | |
| | 30 m | 5 | 2 x 6 | |
| | 36 m | 4 | 2 x 6 | |
| | 42 m | 4 | - | |
| | 48 m | 3 | - | |
| | 54 m | 3 | - | |
| W | 60 m | 3 | - | |
| | 66 m | 3 | - | |
| | 72 m | 3 | - | |
| | 78 m | 2 | - | |
| | 84 m | 2 | - | |
| | 90 m | 2 | - | |
| | 96 m | 2 | - | |

1.4 Criterio limitador: Servicio paralelo



Nota

▶ Con una colocación mínima del cable de elevación de 2 x 6 ramales de cable se garantiza que en el servicio paralelo del cabestrante 1 y cabestrante 2 se evitará una inclinación inadmisible del motón de gancho. Con ello se garantiza el funcionamiento paralelo de ambos cabestrantes.



ADVERTENCIA

Ramales mínimos del cable de elevación no cumplidos Peligro de vuelco de la grúa, fallo de las estructuras de la grúa. Muerte o lesiones graves, altos daños materiales.

► Mantener la colocación mínima del cable de elevación de 2 x 6 ramales de cable.





¡Página vacía!



1 Procedimiento para calcular la colocación del cable de elevación requerida y motón de gancho requerido



Nota

▶ Antes de cada elevación de una carga, se debe calcular el número del cable de elevación y el motón de gancho necesarios para ello. A continuación se muestra el procedimiento cómo se debe calcular el número de ramal del cable de elevación y el motón de gancho para el servicio simple (servicio de grúa con 1 solo cabrestante de cable de elevación) y servicio paralelo (servicio de grúa con 2 cabrestantes de cable de elevación).

1.1 Paso 1: Cálculo para determinar la capacidad de carga

Las capacidades de cargas señaladas en las tablas de cargas incluyen los siguientes pesos:

- Peso de la carga a elevar:
- Peso de los elementos elevadores de carga (eslingas) (motón de gancho y gancho de carga)
- Peso de los elementos de detención



Nota

- Antes de la determinación de la colocación del cable de elevación, la capacidad de carga tiene que ser determinada (Peso de la carga + peso de los elementos elevadores de carga + peso de los elementos de detención).
- ▶ Determinar el peso de la carga.
- ▶ Determinar el peso del motón de gancho necesario para la carga a elevar, véase cuaderno de tablas de cargas capítulo 40.35.
- ▶ Determinar el peso de los elementos de detención.

Resultado:

Peso de la carga.

1.2 Paso 2: Cálculo de la colocación de cable requerida del cable de elevación en función de la tracción máxima permitida (n_{min [tabla de colocación de cable]})



Nota

- Cálculo de la colocación del cable de elevación en función de la tracción máxima de cable en la "tabla de la colocación del cable de elevación" (EST), véase cuaderno de tablas de cargas capítulo 40.90.
- ▶ Determinar la colocación del cable de elevación n_{min [tabla de colocación de cable]} para la capacidad de carga en el servicio de la grúa con 1 cabrestante de cable de elevación en el servicio simple.

Determinar la colocación del cable de elevación $n_{min [tabla de colocación de cable]}$ para la capacidad de carga en el servicio de la grúa con 2 cabrestantes de cable de elevación en el servicio paralelo.

Resultado:

- Colocación del cable necesaria n_{mín [tabla de colocación de cable]}
- 1.3 Paso 3: Determinación de la colocación de cable mínima del cable de elevación y del peso mínimo del motón de gancho por razones estáticas (n_{min [estático]}), (G_{min [estático]})



Nota

Determinar la colocación del cable de elevación y los pesos del motón de gancho necesarias por razones estáticas, véase cuaderno de tablas de cargas capítulo 40.40.

- ▶ Determinar los ramales mínimos del cable de elevación n_{min festáticol}.
- ▶ Determinar el peso mínimo del motón de gancho G_{min [estático]}.

Resultado:

- Colocación del cable necesaria n_{mín [estática]}.
- Motón de gancho necesario G_{mín [estática]}.

1.4 Paso 4: Determinación de la colocación de cable mínima del cable de elevación para un peso seguro de la carga del controlador de cargas LICCON (n_{min [peso de la cargal})



Nota

- Determinar la colocación del cable necesaria para un peso seguro de la carga del controlador de cargas LICCON, véase cuaderno de tablas de cargas capítulo 40.40.
- ▶ Determinar los ramales mínimos del cable de elevación n_{min [peso de la carga]}.

Resultado:

- Colocación del cable necesaria n_{mín [pesar la carga]}.
- 1.5 Paso 5: Determinación de la colocación de cable mínima del cable de elevación para el servicio paralelo (n_{min (servicio paralelo)})



Nota

- Determinar la colocación del cable de elevación necesaria para el servicio paralelo, véase cuaderno de tablas de cargas capítulo 40.40.
- ▶ Determinar los ramales mínimos del cable de elevación n_{min [servicio paralelo]}•

Resultado:

- Colocación del cable necesaria n_{mín [servicio paralelo]}.
- 1.6 Paso 6: Determinación de la colocación de cable mínima del cable de elevación (n) y del peso mínimo del motón de gancho (G), que tiene que ser utilizado para elevar la carga



Nota

- ▶ Después de determinar los ramales mínimos del cable de elevación y los pesos mínimos de los motones de gancho para los criterios límites (n_{min [tablas de colocación]}, n_{min [estático]}, G_{min [estático]}, n_{min [peso de la carga]}, n_{min [servicio paralelo]}) se tiene que determinar la mayor colocación de cable mínima del motón de gancho y el peso mínimo del motón de gancho.
- ▶ Determinar la mayor colocación de cable mínima del cable de elevación n_{min} de los ramales mínimos determinados del cable de elevación (n_{min [tablas de colocación]}, n_{min [sestático]}, n_{min [peso de la carga]}, n_{min [servicio paralelo]}).
- ▶ Determinar el mayor peso mínimo del motón de gancho G_{min} de los pesos mínimos determinados del motón de gancho (G_{min [estático]}).

Resultado:

- Colocación del cable de elevación mínima necesaria n_{min}.
- Peso mínimo necesario de los motones de gancho G_{min}.
- Estos valores se tienen que utilizar para elevar la carga.





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Fig.195219

1 Reducción de la carga con la polea de ramal simple montada



Nota

▶ Las cargas señaladas son válidas para el servicio de grúa en la pluma principal o pluma adicional sin polea de ramal simple montada.

Si en el servicio de grúa con modos de funcionamiento sin polea de ramal simple ésta está montada, se reducen las cargas en los siguientes puntos:

- El peso de la polea de ramal simple
- El peso del cable de elevación que se encuentra colocado en la polea de ramal simple
- El peso de los elementos elevadores de carga (eslingas) utilizados en la polea de ramal simple
- El peso de los elementos elevadores de carga (eslingas) y de detención en el cabezal de pluma



Nota

Para el servicio de grúa en la polea de ramal simple con la carga máxima de 36 t no existe ninguna tabla de cargas adjunta. Valen las tablas de cargas de los tipos de servicio de la pluma principal y adicional con las siguientes reducciones:

- ► El peso de la polea de ramal simple
- ▶ El peso del cable de elevación que se encuentra colocado en la polea de ramal simple
- ► El peso de los elementos elevadores de carga (eslingas) y de detención utilizados en la polea de ramal simple
- ▶ El peso de los elementos elevadores de carga (eslingas) utilizados en el cabezal de pluma

2 Reducción de carga con barras de arriostramiento montadas



Nota

- Las cargas indicadas son válidas sin considerar las barras de arriostramiento montadas.
- ▶ Si las barras de arriostramiento están montadas, la carga posible se reduce.
- ► La reducción de carga depende del peso y del centro de gravedad de las barras de arriostramiento y del ángulo de pluma.

La reducción de carga se calcula simplemente el largo de pluma y el peso métrico de las barras de arriostramiento:

Reducción de carga = 0.5 x Largo de pluma x peso métrico de las barras de arriostramiento

Ejemplo de cálculo para servicio de grúa en la pluma principal con barras de arriostramiento colocadas desde el caballete WA 2:

- Longitud de la pluma: 90 m
- Peso métrico de las barras de arriostramiento: 0.120 t/m
- Reducción de la carga (0.5 x 90 m x 0.120 t/m): aprox. 5.4 t

3 Reducción de carga con juego de rodillos adicional



Nota

Existen 2 juegos de rodillos que pueden montarse juntos o individualmente en la extensión de cabezal SW. Para el cálculo de las tablas de carga es decisiva la configuración de la pluma correspondiente, véase la tabla "Configuración de la pluma para el cálculo de las tablas de carga".

- ➤ Si hay montado un juego de rodillos adicional diferente al indicado en la configuración de la pluma, se deberá reducir la carga a su propio peso.
- ▶ El cabezal de conexión W puede operar con uno de los dos juegos de rodillos.



ADVERTENCIA

Peso no autorizado del motón de gancho debido a juego de rodillos adicional! Peligro de vuelco de la grúa, fallo de las estructuras de la grúa. Muerte o lesiones graves, altos daños materiales.

Si durante el levantamiento y descenso del sistema de la pluma hay instalado un juego de rodillos adicional al previsto:

▶ Reducir el peso del motón de gancho al peso propio del juego de rodillos adicional.

| Juego de rodillos | Peso propio |
|-------------------|-------------|
| 320 t | 1.5 t |
| 300 t | 1.4 t |

Peso propio de los juegos de rodillos

| Pluma | Modos de servicio | Cabezal de pluma | |
|-------------------------------------|--------------------------------|---|--|
| S, HS sin pluma auxiliar | S, HSD, | Extensión de cabezal SW con juegos de rodillos de 320 t + 300 t | |
| S, HS con pluma auxiliar | SW, HSDW, SDWV, SWF, | Cabezal de conexión W con juego de rodillos de 300 t | |
| SL, SL2, HSL, HSL2, SL11, SL14 | SL, SLF, HSLD, SL2D, SL2DF, | Extensión de cabezal SW con juego de rodillos de 320 t | |
| SL3, SL4, SL10, SL13, HSL3, HSL4 | SL3F, HSL4DF, SL10DF, | Cabezal de conexión F | |
| W | SW, SDW, SDWV, SWF, | Extensión de cabezal SW con juego de rodillos de 320 t | |
| F | SLF, SL3F, HSL2DF, SWF, | Extensión cabezal F | |

Configuraciones de pluma para el cálculo de las tablas de carga



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Fig.195219

1 Velocidad de giro máxima autorizada con la carga nominal enganchada



ADVERTENCIA

¡Rebasamiento de la velocidad de giro máxima autorizada! Peligro de vuelco de la grúa, fallo de las estructuras de la grúa. Muerte o lesiones graves, altos daños materiales.

► Cumplir con la velocidad de giro máxima permitida.

| Modo de servicio | Cantidad de mecanis- mos giratorio | Velocidad de giro autorizada | |
|-----------------------------|---------------------------------------|------------------------------|------------------------|
| | | LICCON | n.d.r. |
| Todos los modos de servicio | 1 | 5 % | 0.05 min ⁻¹ |
| | 2 | 5 % | 0.05 min ⁻¹ |
| | 3 | 5 % | 0.04 min ⁻¹ |



Fig.195219

1 Breve descripción de los elementos

1.1 Pluma principal

| Tipo | Descripción |
|------|--|
| S | Pluma principal con mástil en celosía, versión pesada |
| SL | Pluma principal con mástil en celosía, versión mixta |
| SL2 | Pluma principal con mástil en celosía, versión mixta, Variante 2 |
| SL3 | Pluma principal con mástil en celosía, versión mixta, Variante 3 |
| SL4 | Pluma principal con mástil en celosía, versión mixta, Variante 4 |
| SL10 | Pluma principal con mástil en celosía, versión mixta, Variante 10 |
| SL11 | Pluma principal con mástil en celosía, versión mixta, Variante 11 |
| SL13 | Pluma principal con mástil en celosía, versión mixta, Variante 13 |
| SL14 | Pluma principal con mástil en celosía, versión mixta, Variante 14 |
| HS | Pluma principal con mástil en celosía reforzada, versión pesada |
| HSL | Pluma principal con mástil en celosía reforzada, versión mixta |
| HSL2 | Pluma principal con mástil en celosía reforzada, versión mixta, variante 2 |
| HSL3 | Pluma principal con mástil en celosía reforzada, versión mixta, variante 3 |
| HSL4 | Pluma principal con mástil en celosía reforzada, versión mixta, variante 4 |

1.2 Pluma adicional

1.2.1 Accesorio fijo

| Tipo | Descripción |
|------|-----------------------|
| F | Punta fija en celosía |
| Н | Polea de ramal simple |



Nota

▶ Para las poleas de ramal simple con sistema propio de peso, no existen a parte ninguna tabla de cargas.

1.2.2 Accesorio móvil

| Tipo | Descripción |
|------|---|
| W | Punta en celosía basculable, versión pesada |
| WV | Punta en celosía, versión pesada, a un ángulo fijo en relación a la pluma principal |



ADVERTENCIA

¡Mal uso de la grúa!

Peligro que la grúa se vuelque.

Muerte o lesiones graves, altos daños materiales.

▶ Bascular solamente la pluma principal y punta en celosía basculable sucesivamente.

1.3 Pluma Derrick

| Tipo | Descripción |
|------|---------------|
| D | Pluma Derrick |

1.4 Lastre Derrick

| Tipo | Descripción |
|------|--|
| В | Lastre suspendido sin guía |
| B2 | Lastre suspendido con guía |
| В3 | Exclusivamente para el levantamiento/descenso del sistema de pluma con un LTR 1220 como lastre Derrick, véase cuaderno de tablas de cargas, capítulo 40.62.20. |
| B4 | Exclusivamente para el levantamiento/descenso del sistema de pluma con un LTR 1220 como lastre Derrick, véase cuaderno de tablas de cargas, capítulo 40.62.20. |
| BW | Coche lastre |

2 Combinación de los grupos constructivos para los modos de servicio

Los grupos constructivos del sistema de pluma pueden combinarse de acuerdo a los modos de servicio, véase cuaderno de tablas de cargas capítulo 40.62.



Nota

▶ Este cuaderno de tablas de cargas capítulo contiene tablas de cargar para determinados modos de servicio. Vista global de los modos de servicio correspondientes, véase cuaderno de tablas de cargas capítulo 40.90.

3 Datos de los modos de servicio en las tablas de cargas

Los modos de servicio se indican en un símbolo de dos partes. ¡Los datos especificados en la tabla son sólo ejemplos y no corresponden del todo con las de su grúa!

Símbolo de modos de servicio



Lado izquierdo del símbolo = Modo de servicio Pluma principal

Datos posibles:

- Pluma principal
- Ángulo de la pluma principal
- Longitud de la pluma principal
- Longitud del caballete SA
- Peso del motón de gancho
- Inclinación del suelo
- Limitación/Aviso
- Pluma Derrick
- Longitud de la pluma Derrick
- Ángulo de la pluma Derrick
- Radio de la grúa

Lado derecho del símbolo = Modo de servicio Pluma adicional

Datos posibles:

- Pluma adicional
- Ángulo de la pluma adicional
- Longitud de la pluma adicional
- Peso del motón de gancho
- Limitación/Aviso
- Radio del lastre Derrick



Nota

▶ Los valores en la mitad izquierda y mitad derecha del símbolo de los modos de servicio de la tabla de cargas correspondiente, deberán concordar exactamente con los ajustes seleccionados en el Controlador de cargas LICCON. 1011588-00

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40.62 Modo de servicio

40.62 Modo de servicio 1011588-00

1 Modos de servicio con la pluma principal

Ejemplos:

| | Símbolo de r servicio | modos de | Modo de ser- vicio | Descripción |
|---|--------------------------|----------|-----------------------|---|
| 1 | | | Lado izquierdo | |
| | S | | S | Pluma principal con mástil en celosía, versión pesada |
| | 48m | | 48 m | Longitud de la pluma principal |

| | Símbolo de modos de servicio | | Modo de ser- vicio | Descripción |
|---|------------------------------|--|-----------------------|--|
| 1 | | | Lado izquierdo | |
| | 2° SL | | 2° | Inclinación máxima del suelo autorizada |
| | 90m | | SL | Pluma principal con mástil en celosía, versión mixta |
| | 20111 | | 90 m | Longitud de la pluma principal |

| Símbolo de modos de servicio | | Modo de ser- vicio | Descripción | |
|------------------------------|-------------|-----------------------|----------------|--|
| 1 | 7 | | Lado izquierdo | |
| | HSDB 48m | | HSDB | Pluma principal con mástil en celosía reforzada, versión pesada con pluma Derrick y lastre suspendido sin guía |
| | 40111 | | 48 m | Longitud de la pluma principal |

2 Modos de servicio con pluma adicional

2.1 Modos de servicio con pluma adicional con accesorio fijo

Ejemplos:

| Símbolo de modos de servicio | | Modo de ser- vicio | Descripción |
|------------------------------|-------|-----------------------|---|
| | | Lado izquierdo | |
| SL4DBW | F 32° | SL4DBW | Pluma principal con mástil en celosía, versión mixta, variante 4 con pluma Derrick y coche lastre |
| 78m | 18m | 78 m | Longitud de la pluma principal |
| | | Lado derecho | |
| | | F | Punta fija en celosía |
| | | 32° | Punta fija en celosía montada en un ángulo de 32° en relación a la pluma principal. |
| | | 18 m | Longitud de la punta fija en celosía |

| | Símbolo de modos de servicio | | Modo de ser- vicio | Descripción |
|---|------------------------------|--------------|-----------------------|---|
| 1 | | | Lado izquierdo | |
| | HSL2DB 108m | F 28° 30m | HSL2DB | Pluma principal con mástil en celosía reforzada, versión mixta, variante 2 con pluma Derrick y lastre suspendido sin guía |
| 1 | | | 108 m | Longitud de la pluma principal |
| | | | Lado derecho | |
| | | | F | Punta fija en celosía |
| | | | 28° | Punta fija en celosía montada en un ángulo de 28° en relación a la pluma principal. |
| | | | 30 m | Longitud de la punta fija en celosía |

| Símbolo de modos de servicio | | Modo de ser- vicio | Descripción |
|------------------------------|----------|-----------------------|---|
| | | Lado izquierdo | |
| SL10DB2 | F12m 16° | SL10DB2 | Pluma principal con mástil en celosía, versión mixta, va- |
| 1) 147m | yy=20.0m | | riante 10 con pluma Derrick y lastre suspendido con guía |
| | | | Limitación/Aviso, véase el cuaderno de tablas de cargas, el cap. 40.65.10. |
| | | | Longitud de la pluma principal |
| | | Lado derecho | |
| | | F | Punta fija en celosía |
| | | 12 m | Longitud de la punta fija en celosía |
| | | 16° | Punta fija en celosía montada en un ángulo de 16° en relación a la pluma principal. |
| [| | yy= 20.0 m | Radio del lastre Derrick |

2.2 Modos de servicio Pluma adicional con accesorio móvil



ADVERTENCIA

¡Mal uso de la grúa!

Peligro que la grúa se vuelque.

Muerte o lesiones graves, altos daños materiales.

▶ Bascular solamente la pluma principal y punta en celosía basculable sucesivamente.

Ejemplos:





| Símbolo de modos de servicio | | Modo de ser- vicio | Descripción |
|------------------------------|--------|-----------------------|---|
| | | Lado izquierdo | |
| SDB | WV xx° | SDB | Pluma principal con mástil en celosía, versión pesada con pluma Derrick y lastre suspendido sin guía |
| 84m | 12m | 84 m | Longitud de la pluma principal |
| | | Lado derecho | |
| | | WV | Punta en celosía, versión pesada, a un ángulo fijo en relación a la pluma principal |
| | | xx° | La punta en celosía se encuentra en un ángulo fijo en relación a la pluma principal. El ángulo se indica en la respectiva tabla de cargas en la línea xx. |
| | | 12 m | Longitud de la punta en celosía |

| Símbolo de modos de servicio | Modo de ser- vicio | Descripción |
|------------------------------|-----------------------|---|
| | Lado izquierdo | |
| xx° S W54m 42m F36m 26° | xx° | La pluma principal se encuentra en un ángulo fijo en re- lación a la horizontal. El ángulo se indica en la respec- tiva tabla de cargas en la línea xx. |
| | S | Pluma principal con mástil en celosía, versión pesada |
| | 42 m | Longitud de la pluma principal |
| | Lado derecho | |
| | W | Punta en celosía basculable, versión pesada |
| | 54 m | Longitud de la punta en celosía basculable |
| | F | Punta fija en celosía |
| | 36 m | Longitud de la punta fija en celosía |
| | 26° | Punta fija en celosía montada a un ángulo de 26° en relación a la punta en celosía basculable. |



1011588-00 40.62 Modo de servicio

3 Modos de funcionamiento para servicio de la grúa en la pluma principal con pluma adicional montada

Para el servicio de grúa en la pluma principal con la pluma adicional montada existen modos de servicio especiales. Para estos modos de servicio se representa entre corchetes el modo de servicio de la pluma principal.



ADVERTENCIA

¡Mal uso de la grúa!

Peligro de vuelco de la grúa, fallo de las estructuras de la grúa.

Muerte o lesiones graves, altos daños materiales.

Si se representa entre corchetes un modo de servicio de la pluma principal:

► Elevar la carga exclusivamente en la pluma principal.

Ejemplos:

| Símbolo de modos de servicio | | Modo de servicio Descripción | | |
|------------------------------|-------------------|--|---|--|
| | | Lado izquierdo | Lado izquierdo | |
| (S)SL2DB 102m | F 31° 12m 5.5t | (S)SL2DB Pluma principal con mástil en celosía, versión mixta riante 2 con pluma Derrick y lastre suspendido sin g Lastre en la pluma principal. | | |
| | | 102 m | Longitud de la pluma principal | |
| | | Lado derecho | | |
| | | F | Punta fija en celosía | |
| | | 31° | Punta fija en celosía montada en un ángulo de 31° en relación a la pluma principal. | |
| | | 12 m | Longitud de la punta fija en celosía | |
| | | 5.5 t | Peso del motón de gancho que debe encontrarse en la pluma adicional. | |

4 Modos de servicio con varios motones de gancho

En algunos modos de servicio se indica el peso del motón de gancho en el que no está enganchado ninguna carga.



ADVERTENCIA

¡Mal uso de la grúa!

Peligro de vuelco de la grúa, fallo de las estructuras de la grúa.

Muerte o lesiones graves, altos daños materiales.

Si se indica un peso de motón de gancho en el símbolo de modos de servicio:

Montar el motón de gancho con el peso especificado en la pluma correspondiente.

Deberá diferenciarse 2 casos:

- Peso de motón de gancho en la pluma adicional con el servicio de grúa en la pluma adicional
- Peso de motón de gancho en la pluma adicional con el servicio de grúa en la pluma principal





40.62 Modo de servicio 1011588-00

4.1 Peso de motón de gancho en la pluma adicional con el servicio de grúa en la pluma adicional

Ejemplos:

| Símbolo de modos de servicio | | Modo de ser- vicio | Descripción |
|------------------------------|-----|-----------------------|---|
| | | Lado izquierdo | |
| SL2DB | | SL2DB | Pluma principal con mástil en celosía, versión mixta, variante 2 con pluma Derrick y lastre suspendido sin guía |
| 8.5t102m | 24m | 8.5 t | Peso del motón de gancho que debe encontrarse en la pluma principal. |
| | | 102 m | Longitud de la pluma principal |
| | | Lado derecho | |
| | | | Punta fija en celosía |
| | | 13° | Punta fija en celosía montada en un ángulo de 13° en relación a la pluma principal. |
| | | 24 m | Longitud de la punta fija en celosía |

4.2 Peso de motón de gancho en la pluma adicional con el servicio de grúa en la pluma principal



ADVERTENCIA

¡Mal uso de la grúa!

Peligro de vuelco de la grúa, fallo de las estructuras de la grúa.

Muerte o lesiones graves, altos daños materiales.

Si se representa entre corchetes un modo de servicio de la pluma principal:

▶ Elevar la carga exclusivamente en la pluma principal.

Ejemplos:

| Símbolo de modos de Modo de ser- servicio | | Modo de ser- vicio | Descripción |
|--|-------------------|-----------------------|--|
| | | Lado izquierdo | |
| (S)SL2DB 102m | F 31° 12m 5.5t | (S)SL2DB | Pluma principal con mástil en celosía, versión mixta, variante 2 con pluma Derrick y lastre suspendido sin guía. Lastre en la pluma principal. |
| | | 102 m | Longitud de la pluma principal |
| | | Lado derecho | |
| | | F | Punta fija en celosía |
| | | 31° | Punta fija en celosía montada en un ángulo de 31° en relación a la pluma principal. |
| | | 12 m | Longitud de la punta fija en celosía |
| | | 5.5 t | Peso del motón de gancho que debe encontrarse en la pluma adicional. |



Fig.195219

1 Montaje/desmontaje de la viga de orugas con el caballete SA



ADVERTENCIA

¡Incumplimiento de las instrucciones de montaje!

Vuelco de la grúa, caída y balanceo de los componentes de la grúa.

Muerte o lesiones graves, altos daños materiales.

- ▶ Observar y respetar las instrucciones de montaje para el montaje y desmontaje de la viga de orugas con caballete SA, véase el manual de instrucciones de la grúa, capítulo 3.01.
- ▶ Antes del montaje/desmontaje, seleccionar el modo de servicio de montaje correspondiente.

| | Símbolo de modos de servicio | | Modo de ser- vicio | Descripción |
|---|------------------------------|------|-----------------------|--|
| • | | | Lado izquierdo | |
| | SA | | SA | Modo de servicio de montaje con caballete SA |
| | 10.5m | (SA) | 10.5 m | Longitud del caballete SA |
| _ | | | | |

Ejemplo de un modo de servicio de montaje para el montaje/desmontaje de la viga de orugas con caballete SA

2 Levantamiento/Descenso del sistema de pluma con LTR 1220

Para el levantamiento/descenso de sistemas de pluma más largos se necesita un peso de lastre Derrick de hasta 350 t. Este peso necesario se puede reducir o compensar completamente utilizando un LTR 1220 como lastre Derrick.



ADVERTENCIA

¡Incumplimiento de las instrucciones de montaje!

Peligro de vuelco de la grúa, fallo de las estructuras de la grúa.

Muerte o lesiones graves, altos daños materiales.

- ▶ Observar y respetar las instrucciones de montaje para levantar/descender el sistema de pluma con un LTR 1220 como lastre Derrick, véase el manual de instrucciones de la grúa, capítulo 5.34.
- ▶ Antes del levantamiento/descenso, seleccionar el modo de servicio de montaje correspondiente.

Ejemplo de modo de servicio de montaje para levantar/descender el sistema de pluma con un LTR 1220 como lastre Derrick

¡Página vacía!

Fig.123524

1 Descripción de la tabla de cargas



ADVERTENCIA

¡Mal uso de la grúa!

Peligro de vuelco de la grúa, fallo de las estructuras de la grúa.

Muerte o lesiones graves, altos daños materiales.

- Ajustar exactamente el controlador de cargas LICCON con los datos de la tabla de cargas correspondientes.
- Están prohibidos los trabajos fuera del estado permitido del equipo, de las cargas y áreas de giro permitidas según la tabla de cargas.
- Mover el sistema de la pluma en el servicio de montaje sólo dentro de las zonas permitidas.

¡Las especificaciones de la tabla de cargas son a modo de ejemplo y no tienen por qué coincidir con las de su grúa!

- 1 Estándar
 - · Tipo de normativa que cumple la tabla
- 2 Símbolo Largo de pluma principal
 - Longitud de la pluma principal 2.1 en metros (m) o pies (ft)
- 3 Unidades de medida
 - para unidades de longitud en metros (m) o pies (ft)
 - para las unidades de peso en toneladas (t), librakilo (kips) o libras (lbs)
- 4 Código abreviado
 - Describe de forma abreviada el modo de servicio / estado de equipo ajustado.
- 5 Símbolo de modos de servicio
 - Especificación de los modos de servicio, véase cuaderno de tablas de cargas capítulo 40.62
- 6 Número de tablas
- 7 Número de organización
 - · para administración interna de la tabla de cargas de LIEBHERR
- 8 Valores de cargas
 - Los valores de capacidad de carga en toneladas (t), librakilo (kips) o libras (lbs)
- 9 Número de grúa
- 10 Símbolo del alcance
 - · Alcance 10.1 en metros (m) o pies (ft)
- 11 Colocación del cable de elevación
 - en esta línea se indica el número de ramales de cable de elevación
- 12 Ángulo de pluma principal / ángulo de pluma adicional
 - en esta línea se indica el ángulo de pluma correspondiente en grados (°)
- 13 Radio del lastre Derrick
 - en esta línea se indican los radios del lastre Derrick en metros (m) o pies (ft)
- 14 Peso del lastre Derrick
 - en esta línea se indican los pesos del lastre Derrick en toneladas (t), librakilo (kips) o libras (lbs)
- 15 Símbolo Velocidad de viento
 - en esta línea se indica la velocidad de viento máxima permitida en metros por segundo (m/s) o pies por segundo(ft/s)
- 16 Línea se símbolos de las teclas de función
- 17 Especificaciones de página
 - indica en el cuaderno de tablas de cargas el número actual de las páginas

2 Explicación de los símbolos

Radio de pluma

El alcance (radio de trabajo) es la distancia horizontal medida en el suelo entre el motón de gancho y el eje giratorio del chasis superior en metros (m) o pies (ft).



Símbolo para los modos de servicio Pluma principal



Símbolo para los modos de servicio Pluma principal con pluma Derrick



Símbolo para los modos de servicio Pluma principal con pluma Derrick y lastre Derrick



Símbolo para los modos de servicio Pluma adicional con accesorio fijo



Símbolo para los modos de servicio Pluma adicional con accesorio fijo y pluma Derrick



Símbolo para los modos de servicio Pluma adicional con accesorio fijo, pluma Derrick y lastre Derrick



Símbolo para los modos de servicio Pluma adicional con accesorio móvil



Símbolo para los modos de servicio Pluma adicional con accesorio móvil y pluma Derrick



Símbolo para los modos de servicio Pluma adicional con accesorio móvil, pluma Derrick y lastre Derrick

Longitud de la pluma principal



En la fila por debajo de este símbolo están introducidas las diferentes longitudes de la pluma principal en metros (m) o pies (ft).

Colocación del cable de elevación

* n *

Este símbolo indica el número de ramales. El número de ramales indicado es necesario, para que la capacidad de carga máxima de la correspondiente columna de la tabla se pueda alcanzar.

Si un valor de carga es mayor al valor indicado en la columna de la tabla con el numero de ramales máximo posible, entonces aparece indicado en el número de ramales una marca ("!"). Si se muestra la marca "!", es necesario un dispositivo adicional para elevar la carga correspondiente.

Ángulo de pluma principal / ángulo de pluma adicional

XX

Esta símbolo indica el tamaño del ángulo de la pluma principal o ángulo de la pluma adicional en grados (°). El símbolo aparece en los modos de servicio con accesorio móvil. El ángulo de pluma correspondiente se indica en la fila xx de las tablas de carga debajo de los valores de carga.

Radio del lastre Derrick

уу

Este símbolo indica el tamaño del radio del lastre Derrick en metros (m) o pies (ft). Este símbolo aparece en los modos de servicio con lastre Derrick. El radio del lastre Derrick es aquella distancia horizontal medida en el suelo desde el centro de gravedad del lastre Derrick hasta el eje de giro del chasis superior. Los radios correspondientes se indican en la fila xx de las tablas de carga debajo de los valores de carga.

Peso del lastre Derrick

ΖZ

Este símbolo indica el tamaño del radio del lastre Derrick en toneladas (t), librakilo (kips) o libras (lbs). Este símbolo aparece en los modos de servicio con lastre Derrick. Los pesos correspondientes se indican en la fila zz de las tablas de carga debajo de los valores de carga.

Velocidad de viento autorizado



Este símbolo da una velocidad de viento máxima permitida en metros por segundo (m/s) o pies por segundo(ft/s). La velocidad de viento máxima autorizada depende del modo de servicio y del estado de equipo. Si la velocidad del viento sobrepasa el valor indicado, se tiene que ajustar el servicio de la grúa y depositar el equipo de la grúa.

Contrapeso



Este símbolo indica la dimensión del contrapeso en toneladas (t), librakilo (kips) o libras (lbs). El contrapeso indicado tiene que encontrarse en la plataforma giratoria, para poder llegar a los valores de carga de la tabla correspondiente.

Combinaciones de lastre



Este símbolo indica diferentes combinaciones de lastre. En la siguiente tabla se puede ver la composición de las combinaciones de lastre. Para obtener los valores de la tabla de cargas correspondientes, los contrapesos indicados y el lastre central de la respectiva combinación de lastre deben estar montados en la posición respectiva.

| Combinación de lastre | Contrapeso en la pla- taforma giratoria | Contrapeso en la pro- longación de la plata- forma giratoria | Lastre central |
|-----------------------|--|--|----------------|
| var1 | 90 t | 67.5 t | 65 t |
| var2 | 90 t | 67.5 t | 45 t |
| var3 | 90 t | 47.5 t | 45 t |
| var4 | 90 t | 27.5 t | 45 t |

Grúa sobre viga de orugas y lastre central

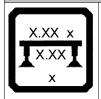


Este símbolo aparece en el servicio de grúa "Grúa sobre viga de orugas" e indica el tamaño del lastre central en toneladas (t), librakilo (kips) o libras (lbs). El lastre central indicado debe encontrarse en el vehículo sobre orugas para que se pueden conseguir los valores de carga de la tabla correspondiente.

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Grúa estabilizada



Datos para la base de apoyo (longitud x anchura) en metros (m) o pies (ft). Este símbolo aparece en el servicio de la grúa "Grúa apoyada". Los largueros corredizos de la grúa tienen que estar desplegados y/o extendidos y empernados a la medida que se indica en este símbolo, si se tiene que trabajar con la tabla de cargas respectiva.

Peso del lastre Derrick y radio del lastre Derrick



Este símbolo indica el peso del lastre Derrick y el radio del mismo. El símbolo aparece con los modos de servicio con lastre Derrick en vez del símbolo de campo de giro. El campo de giro autorizado del chasis superior es con este modo de servicio de 360°.

zz = Valores del lastre Derrick en toneladas (t), librakilo (kips) o libras (lbs)

yy = Radio del lastre Derrick en metros (m) o pies (ft)

Los valores correspondientes se indican en las tablas de carga debajo de los valores de carga.

Campo de giro



En este símbolo se ha especificado el campo de giro del chasis superior de la grúa para la tabla de cargas correspondiente. Pueden ser diferentes áreas de giro posibles. Si pueden ser diferentes áreas de giro posibles, entonces éstas se verán reflejadas en la tabla siguiente.

| Campo de giro | Descripción |
|------------------|------------------------|
| 360° | Giro ilimitado posible |

1 Limitaciones e indicaciones en las tablas de cargas



ADVERTENCIA

Incumplimiento de las limitaciones e indicaciones en las tablas de cargas.

Peligro de vuelco de la grúa, fallo de las estructuras de la grúa.

Muerte o lesiones graves, altos daños materiales.

► Cumplir las limitaciones e indicaciones.



Nota

▶ Parcialmente se indican las limitaciones e indicaciones en determinados modos de servicio. Las limitaciones e indicaciones se señalan con una marca (signos, cifras o letras) en los símbolos de modos de servicio. Las marcas correspondientes se explican a continuación.

1.1 Marca: 1)



Nota

Si el cable de elevación para la elevación está colocado para la carga máxima:

▶ El motón de gancho no puede descender hacia el suelo.

| N | Marca 1) | | Descripción |
|---|--------------------|----------------------|--|
| | SL10DB2 1) 147m | F12m 16° yy=20.0m | En caso de colocación del cable de elevación para la carga máxima, el motón de gancho no alcanza el suelo. |

1.2 Marca: 2)



ADVERTENCIA

Levantamiento / Descenso defectuoso del sistema de pluma!

Peligro de vuelco de la grúa, fallo de las estructuras de la grúa.

Muerte o lesiones graves, altos daños materiales.

▶ Realizar el levantamiento / descenso del sistema de pluma tal como se describe en el manual de servicio con las tablas de levantamiento y descenso.

| Marca 2) | | Descripción |
|----------|-------|--|
| SL13DB | F 16° | El levantamiento / descenso del sistema de pluma debe realizarse con el lastre Derrick "B2". |
| 2) 153m | 12m | |



Fig.195219



1 Inclinación máxima autorizada de la grúa

Las inclinaciones señaladas en el cuaderno de tablas de cargas valen para el servicio de la grúa con la tabla de cargas seleccionada.



ADVERTENCIA

¡Rebasamiento de la inclinación máxima autorizada! Vuelco de la grúa, fallo de las estructuras de la grúa. Muerte o lesiones graves, altos daños materiales.

Mantener la inclinación máxima autorizada de la grúa.

| Modo de servicio | Inclinación máxima autorizada de la grúa |
|-----------------------|--|
| Sobre orugas | 0.3° |
| Sobre estabilizadores | 0.0° |

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Fig.195219

1 Definición

Para una mejor comprensión, se indican a continuación los términos más importantes relativos a la influencia del viento en el servicio de grúa.



Nota

- ► Familiarícese con los términos. ¡Para determinar y calcular la velocidad de viento autorizado, se debe conocer la magnitud de las influencias!
- ▶ Diríjase a Liebherr-Werk Ehingen GmbH si necesita más informaciones sobre la influencia del viento en servicio de grúa.

| Señales | Unidad | Denominación | Definición |
|-------------------------|--------|---|--|
| A _P | [m²] | Superficie de proyección | Superficie determinante para el cálculo de la superficie expuesta al viento, vertical en relación al flujo de entrada. |
| C _w | | Coeficiente de resistencia al viento | Valor para el arrastre de un cuerpo en resistencia al viento. |
| A_{w} | [m²] | Superficie expuesta al viento | Superficie expuesta al viento = Superficie de proyección x coeficiente de resistencia al viento |
| | | | $A_{W} = A_{P} \times C_{W}$ |
| m _T | [t] | Carga | Valor individual tomado de la tabla de cargas. |
| M _H | [t] | Carga de elevación | Peso por elevar (Masa) (incluye elementos de detención, motón de gancho y eventualmente parte del cable de elevación no considerado todavía en el cálculo). La carga de elevación podrá alcanzar como máximo aquel valor indicado como máximo en la tabla de cargas. |
| m _N | [t] | Carga útil | Peso (Masa) del componente por elevar (sin elementos de detención ni motón de gancho). |
| v(z) | [m/s] | Velocidad de ráfagas de vi- ento de 3 segundos | Valor promedio resentido en un espacio de 3 segundos a una altura z sobre el nivel del suelo. |
| V _{max} | [m/s] | Velocidad de viento máximo autorizado | Velocidad de ráfagas de viento máximo autorizado de 3 segundos a una altura de elevación máxima. |
| \mathbf{V}_{max_TAB} | [m/s] | Velocidad de viento máximo autorizado (tabla de cargas) | Velocidad de ráfagas de viento máximo autorizado de 3 segundos a una altura de elevación máxima de acuerdo con la tabla de cargas para los valores de carga. |
| р | [N/m²] | Presión dinámica | Carga de presión sometido en un cuerpo debido al flujo de entrada del viento. |
| | | | Presión dinámica = Densidad /2 x (velocidad ráfaga de viento de 3 segundos) ² |
| | | | $p = \rho/2 \times (v(z))^2$ |
| | | | (ρ = Densidad del aire = 1.25 kg/m³) |
| F_{w} | [n] | Cargas sometidas a viento | Influencia de fuerza ejercida en un cuerpo debido al flujo de entrada del viento. |
| | | | $F_w = A_w \times p$ |

Símbolos de fórmulas



2 Influencia del viento en el controlador de cargas LIC-CON

Especialmente en los modos de servicio con sistemas largos de pluma y con la pluma en posición vertical, el sistema de la grúa puede estar sometido a carga o descarga adicional por la influencia del viento. Por consecuencia el valor de la carga visualizada está alterada. El controlador de cargas LIC-CON se puede eventualmente desconectar mucho antes o mucho después.

2.1 Viento por la parte posterior

Si el viento viene por la parte posterior, el sistema de pluma estará sometido a carga adicional. La indicación del valor de carga será demasiada alta. La desconexión del controlador de cargas LICCON ya se produce con una carga de elevación la cual es inferior a la carga máxima.

2.2 Viento por la parte de delante

Si el viento viene por la parte de delante, el sistema de pluma estará sometido a descarga adicional. La indicación del valor de carga será demasiada baja. La desconexión del controlador de cargas LIC-CON se produce con una carga de elevación sólo cuando ésta es mayor que la carga máxima.



PELIGRO

¡Peligro de vuelco y peligro de sobrecarga de los componentes portadores de carga! Los vientos por la parte delantera no reducen la carga ejercida en el gancho, cable de elevación, poleas de cable ni cabrestante de elevación. ¡En caso de vientos por la parte delantera, se podría sobrecargar dicho grupo constructivo al elevar la carga hasta llegar a la desconexión del Controlador de cargas LICCON!

Si baja el viento por la parte delantera y si antes se había cargado hasta haberse desconectado el Controlador de cargas LICCON, toda la grúa podrá sobrecargarse.

▶ El gruista debe conocer el peso de la carga de elevación y no debe sobrepasar la carga máxima.

2.3 Viento por la parte lateral

Si el viento viene por la parte lateral, el sistema de pluma estará sometido a carga lateralmente. El indicador de carga es casi el mismo que con el servicio de grúa sin influencia del viento.



PELIGRO

¡Peligro de vuelco y peligro de sobrecarga de los componentes portadores de carga! ¡Si con el servicio de grúa, la velocidad de viento es mayor que aquella máxima autorizada, entonces la grúa se sobrecargará involuntariamente con el viento lateral!

▶ Determinar antes del servicio de grúa la velocidad de viento máximo autorizado y si fuera necesario efectuar el cálculo de la superficie de ataque del viento de la carga.

3 Velocidad de viento autorizado y cálculo de la superficie de ataque del viento de la carga



PELIGRO

¡Peligro de vuelco y peligro de sobrecarga de los componentes portadores de carga!

- ▶ El gruista debe informarse antes de iniciar el trabajo a través del Instituto de Meteorología sobre el pronóstico de velocidad del viento. Si se han pronosticado velocidades del viento inadmisibles, esta prohibido levantar la carga de elevación.
- ► La velocidad de ráfagas de viento de 3 segundos v(z) en la posición más elevada de la grúa no debe sobrepasar en ningún momento la velocidad de viento máximo autorizado (v_{max}) ni la velocidad de viento máximo autorizado según tabla de cargas (v_{max_TAB}).





Nota

- ▶ La velocidad de viento máximo autorizado (v_{max}) y la velocidad de viento máximo autorizado indicada según la tabla de cargas (v_{max_TAB}) se refieren siempre a la velocidad de ráfagas de 3 segundos que alcanza en la altura el punto más alto de la grúa.
- ▶ Los servicios de información del tiempo atmosférico dan frecuentemente además de la velocidad de las ráfagas de 3 segundos también la velocidad del viento (v_m) en un periodo de tiempo de 10 minutos (la llamada media de 10 minutos). La velocidad de viento se relaciona normalmente al promedio de la velocidad de viento tal como lo es la escala de viento a la escala Beaufort, es decir una velocidad medida en un espacio de tiempo de 10 minutos a una altura de 10 m sobre el nivel del suelo o sobre el nivel del mar.
- ► La velocidad de ráfagas de viento de 3 segundos determinante para el cálculo a la altura del punto más elevado de la grúa es muy superior al promedio de velocidad de viento medida en un espacio de 10 minutos a una altura de 10 m sobre el nivel del suelo.

El servicio de grúa de manera general está autorizado hasta llegar a la velocidad de viento máximo autorizado (v_{máx TAB}) indicada en la respectiva tabla de cargas para el largo de pluma actual.

Para ello, los requisitos previos son los siguientes:

la superficie sometida al viento (A_w) de la carga de elevación no es superior a 1.2 m²/t



PELIGRO

¡Peligro de vuelco y peligro de sobrecarga de los componentes portadores de carga!

- ► La velocidad de viento máximo autorizado según la tabla de cargas (v_{max_TAB}) no deberá sobrepasarse, incluso si las superficies sometidas al viento (A_w) de la carga de elevación es inferior a 1.2 m²/t.
- ► Si la superficie sometida al viento (A_w) de la carga de elevación es superior a 1.2 m²/t , la velocidad de viento máximo autorizado (v_{max}) para el estado de carga debe calcularse nuevamente.

3.1 Coeficiente de resistencia al viento (c,,)

Para determinar la velocidad de viento máximo autorizado es necesario el coeficiente de resistencia al viento (c_w) . El coeficiente de resistencia al viento (c_w) depende de la forma física de la carga de elevación.



Nota

► El coeficiente de resistencia al viento (c_w) puede consultarse al fabricante de la carga.

En la siguiente tabla se especifican las formas típicas con los coeficientes de resistencia al viento correspondientes (c_w).

Formas con coeficientes de resistencia al viento correspondientes (cw)

3.2 Determinación de la velocidad de viento máximo autorizado

Con los métodos siguientes, se puede medir la velocidad de viento máximo autorizado:

- 1. Calcular velocidad de viento máxima autorizada
- 2. Determinar velocidad de viento máxima autorizada con diagramas de escala de viento



3.3 Calcular velocidad de viento máxima autorizada

$$v_{\text{max}} = v_{\text{max_TAB}} \times \sqrt{\frac{1.2 \frac{m^2}{t} \times m_{\text{H}}}{A_{\text{W}}}}$$

Fig.111606: Fórmula para calcular la velocidad de viento máximo autorizado

Para el cálculo se requieren los siguientes datos:

- Velocidad de viento máximo autorizado según tabla de cargas (v_{máx TAB})
- Carga de elevación(m_н)
- Superficie de proyección de la carga de elevación (A_P)
- Coeficiente de resistencia al viento (c_w)

Descripción del procedimiento:

- 1. Cálculo de la superficie expuesta al viento $(A_w = A_P \times c_w)$
- 2. Control si la superficie sometida al viento A_w sobrepasa el valor límite de 1.2 m²/t
- 3. Cálculo de la velocidad de viento máximo autorizado (v_{máx})

3.3.1 Ejemplo para calcular la velocidad de viento máximo autorizado

Datos para calcular el estado de carga:

$$v_{max_TAB} = 9.0 \text{ m/s}$$

$$m_H = 50.0 t$$

$$A_p = 70.0 \text{ m}^2$$

$$c_{w} = 1.4$$

Paso 1: Cálculo de la superficie expuesta al viento

$$A_W = A_P \times C_W$$

$$A_w = 70.0 \text{ m}^2 \text{ x } 1.4$$

$$A_w = 98.0 \text{ m}^2$$

Resultado: La superficie expuesta al viento A_w es de: 98.0 m²

Paso 2: Control si la superficie sometida al viento A_w sobrepasa el valor límite de 1.2 m²/t

La superficie expuesta al viento por tonelada de carga de elevación es de: 98.0 m² / 50 t = 1.96 m²/t

Resultado: La superficie sometida al viento por toneladas de carga de elevación sobrepasa el valor límite de 1.2 m²/t.

¡La velocidad de viento máximo autorizado debe ser calculada de nuevo!

Paso 3: Cálculo de la velocidad de viento máximo autorizado

$$V_{max} = V_{max_TAB} \times \sqrt{\frac{1.2 \frac{m^2}{t} \times m_H}{A_w}}$$

$$V_{max} = 9 \% \times \sqrt{\frac{1.2 \frac{m^2}{t} \times 50t}{98 m^2}}$$

$$V_{max} = 7.04 \%$$

Fig.111607

Resultado: La velocidad de viento máximo autorizado es de: 7.04 m/s

3.4 Determinar velocidad de viento máxima autorizada con diagramas de escala de viento

Dependiendo de la velocidad de viento máximo autorizado de acuerdo con la tabla de cargas ($v_{\text{máx_TAB}}$), la velocidad de viento máximo autorizado ($v_{\text{máx}}$) puede medirse para el estado de carga con los siguientes diagramas de escalas de viento.

Presentación del diagrama de escalas de viento:

- Diagrama 7.0 m/s: Diagrama de escala de viento para tablas de cargas con una velocidad de viento máximo autorizado (v_{max TAB}) de 7.0 m/s
- Diagrama 8.6 m/s: Diagrama de escala de viento para tablas de cargas con una velocidad de viento máximo autorizado (v_{max TAB}) de 8.6 m/s
- Diagrama 9.0 m/s: Diagrama de escala de viento para tablas de cargas con una velocidad de viento máximo autorizado (v_{max TAB}) de 9.0 m/s
- Diagrama 9.9 m/s : Diagrama de escala de viento para tablas de cargas con una velocidad de viento máximo autorizado (v_{max TAB}) de 9.9 m/s
- Diagrama 11.1 m/s : Diagrama de escala de viento para tablas de cargas con una velocidad de viento máximo autorizado (v_{max_TAB}) de 11.1 m/s
- Diagrama 12.8 m/s : Diagrama de escala de viento para tablas de cargas con una velocidad de viento máximo autorizado (v_{max_TAB}) de 12.8 m/s
- Diagrama 14.3 m/s : Diagrama de escala de viento para tablas de cargas con una velocidad de viento máximo autorizado (v_{max TAB}) de 14.3 m/s



ADVERTENCIA

¡Muerte o graves daños materiales por caída de la grúa o fallo de las estructuras de la grúa! ¡Las personas pueden morir o lesionarse gravemente!

¡Se pueden ocasionar grandes daños materiales!

► La velocidad de viento máximo autorizado según tabla de cargas (v_{max_TAB}) debe coincidir con la velocidad de viento máximo autorizado del diagrama de la escala de viento.

Para medir se requieren los siguientes datos:

- Velocidad de viento máximo autorizado según tabla de cargas (v_{máx TAB})
- Carga de elevación(m_н)
- Superficie de proyección de la carga de elevación (A_P)
- Coeficiente de resistencia al viento (c_w)

Descripción del procedimiento:

- 1. Cálculo de la superficie expuesta al viento $(A_w = A_P \times c_w)$
- 2. Control si la superficie sometida al viento A_w sobrepasa el valor límite de 1.2 m²/t.
- 3. Determinación de la velocidad de viento máximo autorizado (v_{máx}) con el diagrama de escala de viento

3.4.1 Ejemplo para medir la velocidad de viento máximo autorizado

Datos para calcular el estado de carga:

$$v_{max_TAB} = 9.0 \text{ m/s}$$

 $m_H = 50.0 \text{ t}$
 $A_P = 70.0 \text{ m}^2$
 $c_W = 1.4$

Paso 1: Cálculo de la superficie expuesta al viento

$$A_{w} = A_{p} \times c_{w}$$

 $A_{w} = 70.0 \text{ m}^{2} \times 1.4$
 $A_{w} = 98.0 \text{ m}^{2}$

Resultado: La superficie expuesta al viento A_w es de: 98.0 m²





La superficie expuesta al viento por tonelada de carga de elevación es de: 98.0 m² / 50 t = 1.96 m²/t

Resultado: La superficie sometida al viento por toneladas de carga de elevación sobrepasa el valor límite de 1.2 m²/t.

¡La velocidad de viento máximo autorizado debe ser determinada de nuevo!

Paso 3: Determinación de la velocidad de viento máximo autorizado (v_{max}) con el diagrama de escala de viento

Medida de la velocidad de viento máximo autorizado (v_{max}) tomada del respectivo diagrama de escala de viento para las tablas de cargas con una velocidad de viento máximo autorizado (v_{max_TAB}) de 9 m/s

Diagrama 9.0 m/s

Resultado: La velocidad de viento máximo autorizado es de: 7.04 m/s

3.4.2 Diagrama de escala de viento

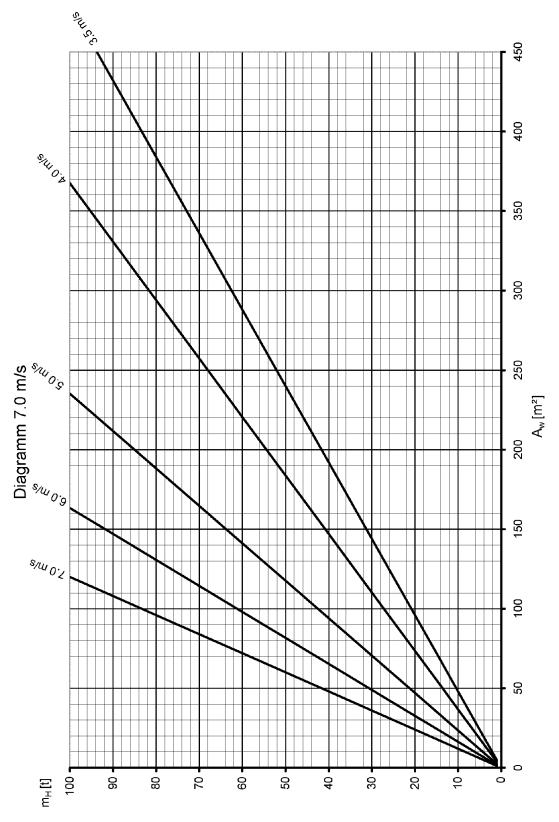


Fig.115563: Diagrama de escala de viento 7.0 m/s para tablas de cargas con una velocidad de viento máximo autorizado (v_{max_TAB}) de 7.0 m/s

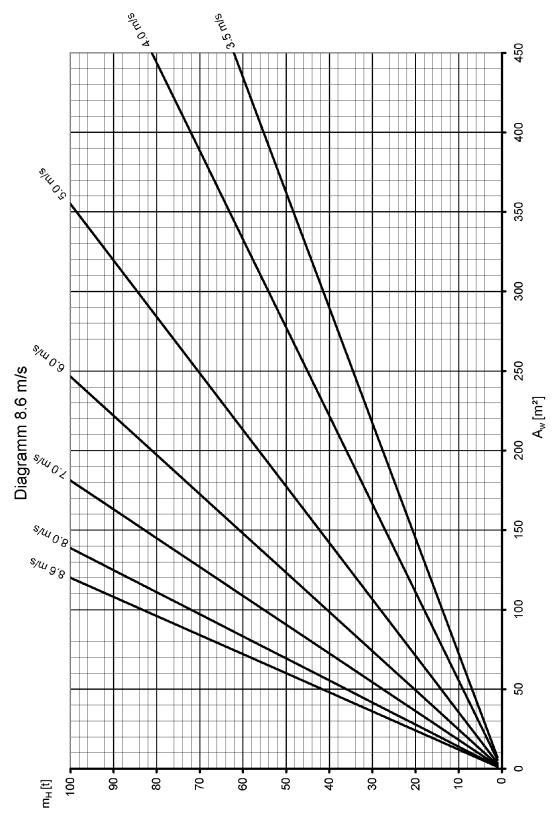


Fig.115564: Diagrama de escala de viento 8.6 m/s para tablas de cargas con una velocidad de viento máximo autorizado (v_{max_TAB}) de 8.6 m/s

Fig.115565: Diagrama de escala de viento 9.0 m/s para tablas de cargas con una velocidad de viento máximo autorizado (v_{max_TAB}) de 9.0 m/s

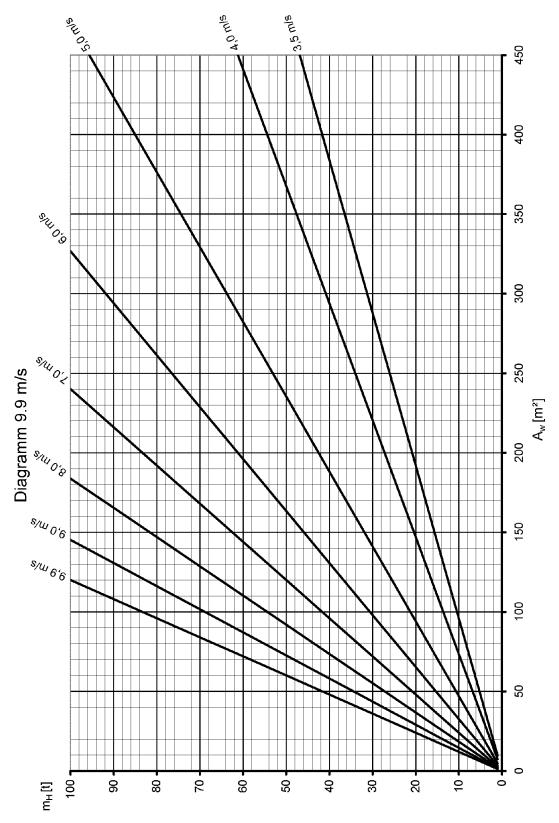


Fig.115566: Diagrama de escala de viento 9.9 m/s para tablas de cargas con una velocidad de viento máximo autorizado (v_{\max_TAB}) de 9.9 m/s

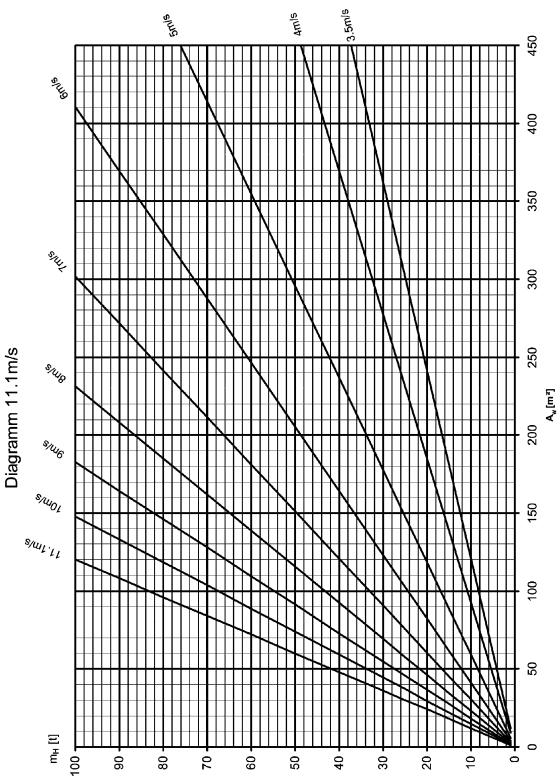


Fig.115567: Diagrama de escala de viento 11.1 m/s para tablas de cargas con una velocidad de viento máximo autorizado ($v_{\rm max_TAB}$) de 11.1 m/s

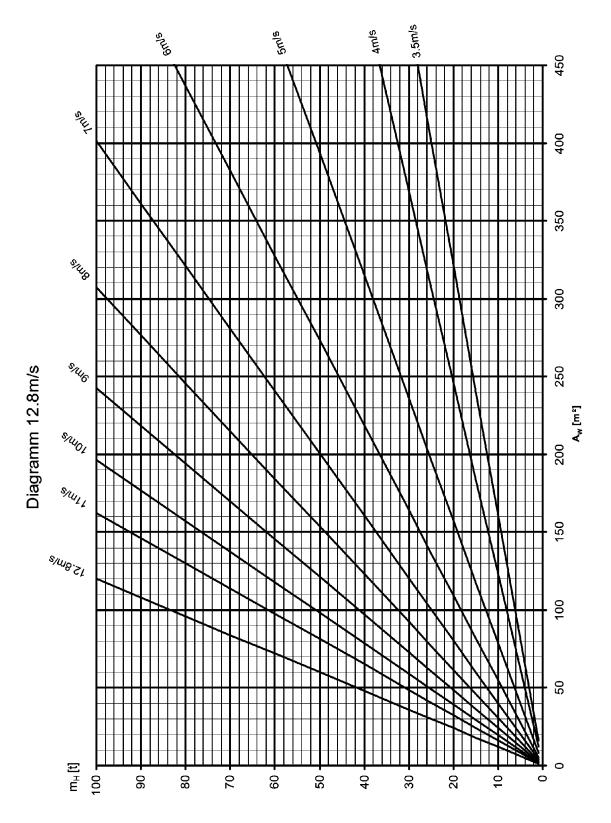


Fig.115568: Diagrama de escala de viento 12.8 m/s para tablas de cargas con una velocidad de viento máximo autorizado ($v_{\rm max_TAB}$) de 12.8 m/s

3.5m/s

4mls

SIMIL

Fig.115569: Diagrama de escala de viento 14.3 m/s para tablas de cargas con una velocidad de viento máximo autorizado ($v_{\rm max_TAB}$) de 14.3 m/s

¡Página vacía!

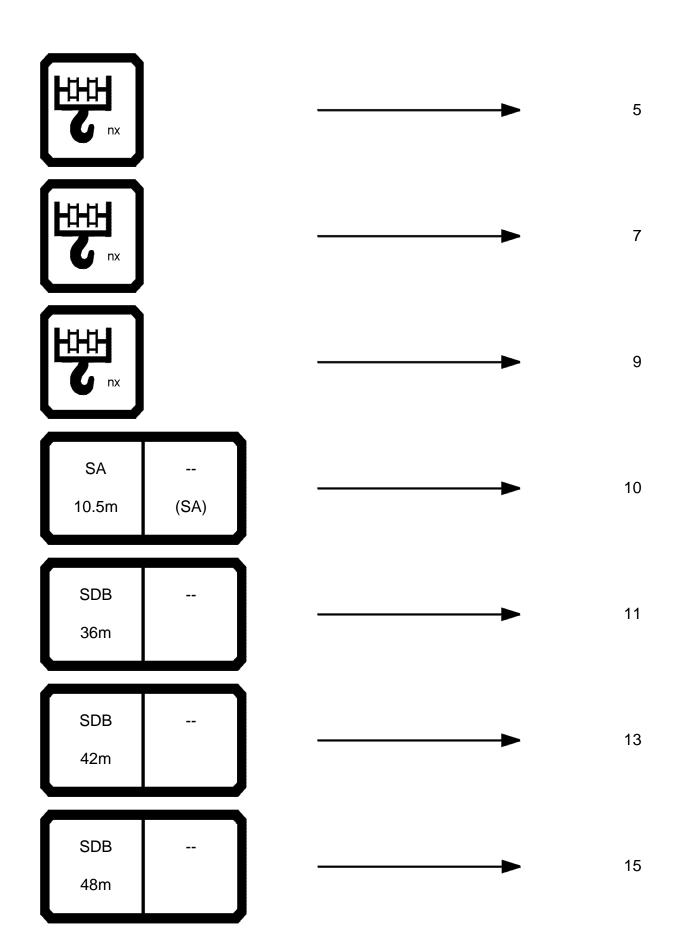
109539-00 40.90 Tabla de cargas

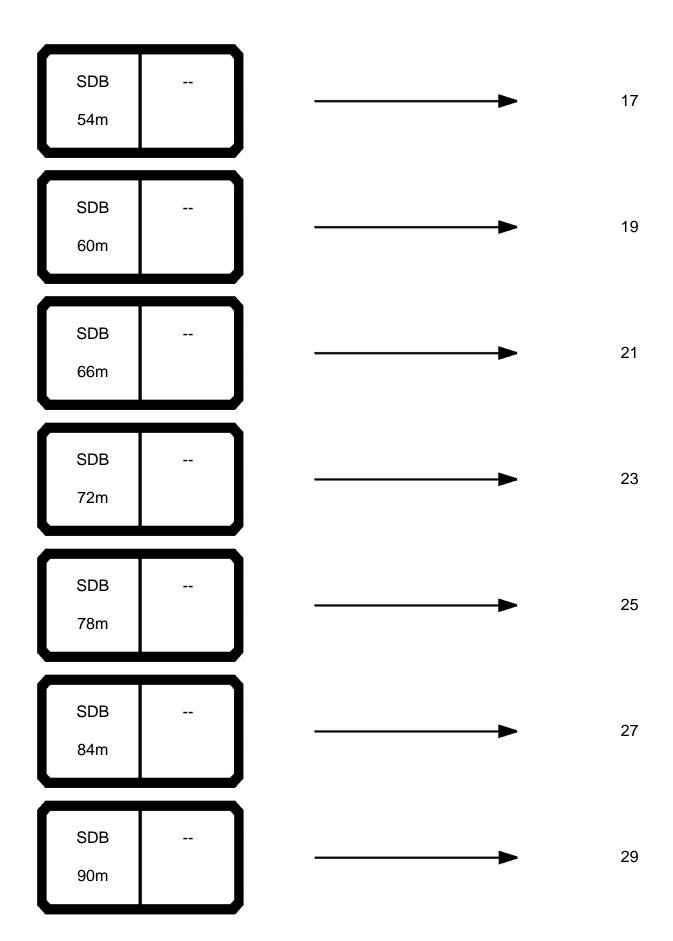
LWE//418100-01-10/es

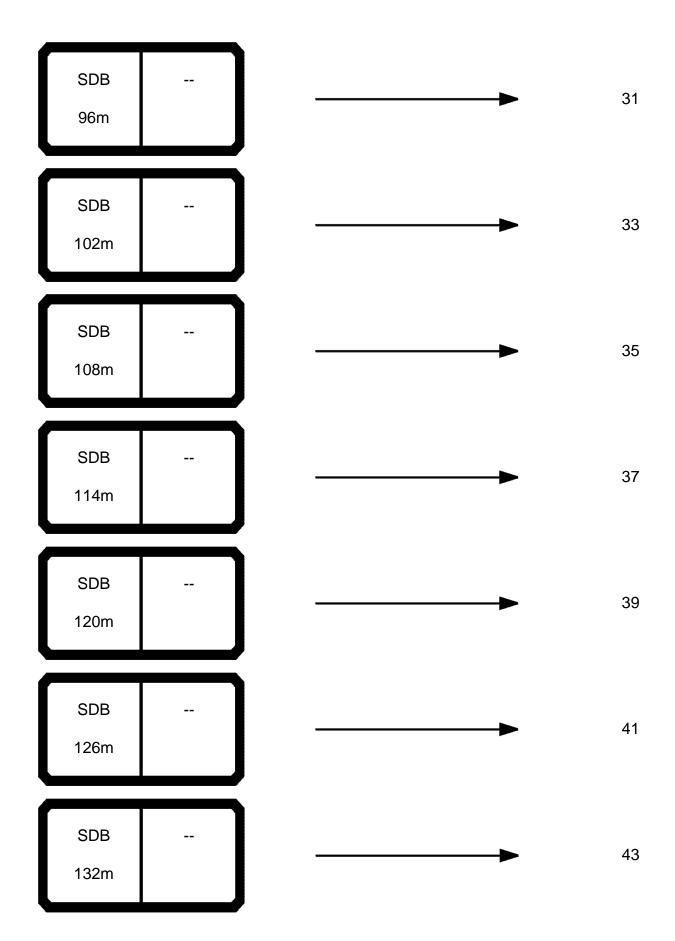
40.90 Tabla de cargas 109539-00

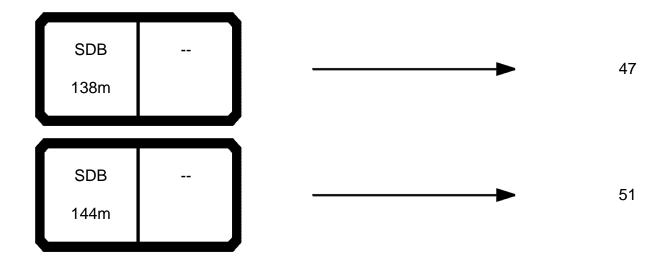
1 Tabla de cargas

¡Página vacía!









typ1: D=28,0 mm

| HHH | . |
|-------------|----------|
| 6 nx | |
| 1 | 18,1 |
| 2 | 35,9 |
| 3 | 53,4 |
| 4 | 70,7 |
| 5 | 87,7 |
| 6 | 104,5 |
| 7 | 121,0 |
| 8 | 137,2 |
| 9 | 153,2 |
| 10 | 169,0 |
| 11 | 184,5 |
| 12 | 199,9 |
| 13 | 214,9 |
| 14 | 229,8 |
| 15 | 244,4 |
| 16 | 258,8 |
| 17 | 273,0 |
| 18 | 287,0 |
| 19 | 300,8 |
| 20 | 314,3 |
| 21 | 327,7 |
| 22 | 340,8 |
| 23 | 353,8 |
| 24 | 366,6 |
| 25 | 379,1 |
| 26 | 391,5 |
| 27 | 403,7 |
| 28 | 415,7 |
| 29 | 427,6 |
| 30 | 439,2 |
| 31 | 450,7 |
| 32 | 462,0 |
| 33 | 473,2 |
| 34 | 484,2 |
| 35 | 495,0 |
| 36 | 505,6 |
| 37 | 516,1 |
| 38 | 526,4 |
| 39 | 536,6 |
| 40 | 546,6 |

typ1: D=28,0 mm

| | 5 |
|----|----------|
| | 4-1 t |
| 41 | 556,5 |
| 42 | 566,2 |
| 43 | 575,8 |
| 44 | 585,2 |
| 45 | 594,5 |
| 46 | 603,7 |
| 47 | 612,7 |
| 48 | 621,6 |
| 49 | 630,3 |
| 50 | 639,0 |
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typ2: D=25,0 mm

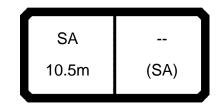
| HHH | . |
|-------------|------------|
| T nx | □ , |
| 1 | 12,6 |
| 2 | 24,9 |
| 3 | 37,1 |
| 4 | 49,1 |
| 5 | 60,9 |
| 6 | 72,5 |
| 7 | 84,0 |
| 8 | 95,3 |
| 9 | 106,4 |
| 10 | 117,4 |
| 11 | 128,2 |
| 12 | 138,8 |
| 13 | 149,3 |
| 14 | 159,6 |
| 15 | 169,7 |
| 16 | 179,7 |
| 17 | 189,6 |
| 18 | 199,3 |
| 19 | 208,9 |
| 20 | 218,3 |
| 21 | 227,5 |
| 22 | 236,7 |
| 23 | 245,7 |
| 24 | 254,6 |
| 25 | 263,3 |
| 26 | 271,9 |
| 27 | 280,4 |
| 28 | 288,7 |
| 29 | 296,9 |
| 30 | 305,0 |
| 31 | 313,0 |
| 32 | 320,9 |
| 33 | 328,6 |
| 34 | 336,2 |
| 35 | 343,7 |
| 36 | 351,1 |
| 37 | 358,4 |
| 38 | 365,6 |
| 39 | 372,6 |
| 40 | 379,6 |
| 10 | 37 0,0 |

typ2: D=25,0 mm

| | ₹ |
|----|----------|
| 41 | 386,5 |
| 42 | 393,2 |
| 43 | 399,9 |
| 44 | 406,4 |
| 45 | 412,9 |
| 46 | 419,2 |
| 47 | 425,5 |
| 48 | 431,7 |
| 49 | 437,7 |
| 50 | 443,7 |
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typ3: D=28,0 mm

| HHH | . |
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| G nx | □ , |
| 1 | 16,1 |
| 2 | 31,9 |
| 3 | 47,5 |
| 4 | 62,8 |
| 5 | 78,0 |
| 6 | 92,8 |
| 7 | 107,5 |
| 8 | 122,0 |
| 9 | 136,2 |
| 10 | 150,2 |
| 11 | 164,0 |
| 12 | 177,6 |
| 13 | 191,0 |
| 14 | 204,2 |
| 15 | 217,2 |
| 16 | 230,1 |
| 17 | 242,7 |
| 18 | 255,1 |
| 19 | 267,3 |
| 20 | 279,4 |
| 21 | 291,3 |
| 22 | 303,0 |
| 23 | 314,5 |
| 24 | 325,8 |
| 25 | 337,0 |
| 26 | 348,0 |
| 27 | 358,9 |
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*** 300 074619 22.01 CODE >0003< V181 0201 m > < t10,5 3,0 47,0 3,5 47,0 4,0 47,0 4,5 47,0 5,0 45,0 5,5 42,0 6,0 37,5 6,5 33,0 7,0 28,0 7,5 25,9 8,0 23,7 8,5 21,5 9,0 19,0 9,5 17,8 10,0 16,3 10,5 15,0 11,0 13,5 * n * 0 0-40 m/s 14,3 SA 10.5m



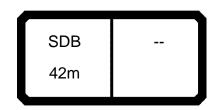
| 0/4618 | <u>'</u> | | | | | | | | | | | 220 | 4 | 22.50 |
|--------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | | m | ı > < t | | CO | DE : | >806 | 64< | | | , | V18 | 1 1/ | 100 |
| F M m | 36,0 | 36,0 | 36,0 | 36,0 | 36,0 | 36,0 | 36,0 | 36,0 | 36,0 | 36,0 | 36,0 | 36,0 | 36,0 | 36,0 |
| 7,0 8,0 | 492,0 425,0 | 571,0 504,0 | 600,0 556,0 | 600,0 596,0 | 600,0 600,0 | 600,0 600,0 | 600,0 600,0 | 600,0 600,0 | 498,0 429,0 | 586,0 520,0 | 600,0 573,0 | 600,0 600,0 | 600,0 600,0 | 600,0 600,0 |
| 9,0 | 370,0 | 446,0 | 504,0 | 551,0 | 586,0 | 600,0 | 600,0 | 600,0 | 375,0 | 461,0 | 524,0 | 576,0 | 596,0 | 600,0 |
| 10,0 | 322,0 | 392,0 | 453,0 | 498,0 | 539,0 | 573,0 | 600,0 | 600,0 | 327,0 | 406,0 | 472,0 | 521,0 | 564,0 | 600,0 |
| 11,0 | 285,0 | 354,0 | 413,0 | 457,0 | 497,0 | 534,0 | 570,0 | 588,0 | 289,0 | 367,0 | 430,0 | 479,0 | 524,0 | 567,0 |
| 12,0 | 255,0 | 321,0 | 374,0 | 420,0 | 456,0 | 492,0 | 526,0 | 551,0 | 258,0 | 332,0 | 392,0 | 440,0 | 483,0 | 524,0 |
| 14,0 | 209,0 | 270,0 | 316,0 | 359,0 | 394,0 | 427,0 | 457,0 | 487,0 | 212,0 | 280,0 | 332,0 | 379,0 | 418,0 | 455,0 |
| 16,0 | 173,0 | 229,0 | 269,0 | 308,0 | 342,0 | 372,0 | 399,0 | 427,0 | 175,0 | 238,0 | 283,0 | 328,0 | 363,0 | 396,0 |
| 18,0 | 144,0 | 192,0 | 235,0 | 270,0 | 303,0 | 330,0 | 355,0 | 381,0 | 146,0 | 200,0 | 248,0 | 288,0 | 322,0 | 353,0 |
| 20,0 22,0 | 123,0 107,0 | 165,0 144,0 | 206,0 180,0 | 238,0 214,0 | 269,0 242,0 | 295,0 267,0 | 318,0 288,0 | 341,0 310,0 | 125,0 108,0 | 171,0 149,0 | 218,0 190,0 | 254,0 227,0 | 287,0 259,0 | 315,0 286,0 |
| 24,0 | 94,0 | 127,0 | 160,0 | 193,0 | 219,0 | 243,0 | 263,0 | 283,0 | 95,0 | 132,0 | 169,0 | 206,0 | 235,0 | 260,0 |
| 26,0 | 83,0 | 113,0 | 143,0 | 173,0 | 198,0 | 221,0 | 240,0 | 258,0 | 84,0 | 118,0 | 151,0 | 185,0 | 213,0 | 237,0 |
| 28,0 | 74,0 | 102,0 | 129,0 | 157,0 | 182,0 | 204,0 | 223,0 | 239,0 | 75,0 | 106,0 | 137,0 | 167,0 | 197,0 | 220,0 |
| 30,0 | 67,0 | 92,0 | 118,0 | 143,0 | 167,0 | 188,0 | 205,0 | 219,0 | 68,0 | 96,0 | 125,0 | 153,0 | 181,0 | 203,0 |
| 32,0 | 61,0 | 84,0 | 108,0 | 131,0 | 155,0 | 175,0 | 188,0 | 196,0 | 62,0 | 88,0 | 114,0 | 140,0 | 167,0 | 184,0 |
| 34,0 | 56,0 | 78,0 | 99,0 | 121,0 | 143,0 | 162,0 | 170,0 | 172,0 | 56,0 | 81,0 | 105,0 | 130,0 | 154,0 | 164,0 |
| 36,0 | 51,0 | 72,0 | 92,0 | 113,0 | 134,0 | 146,0 | 147,0 | 147,0 | 52,0 | 75,0 | 98,0 | 121,0 | 139,0 | 140,0 |
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| * n * | 35 | 43 | 46 | 46 | 46 | 46 | 46 | 46 | 36 | 45 | 46 | 46 | 46 | 46 |
| уу — | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 15,0 | 15,0 | 15,0 | 15,0 | 15,0 | 15,0 |
| ZZ _ | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 | 300,0 | 350,0 | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 |
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| 0-10 | 100 | 12.0 | 12.0 | 120 | 120 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 |
| ⋓ m/s | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 |
| | | | | | 1 | Α . | 1 | 1.0 | Sa. | AD. | | $\overline{}$ | $\overline{}$ | \overline{I} |
| | | SDB | | | | <u> </u> | | 1.0 x | | | | | | |
| | | 36m | | | | 150 | | 14.0 | | ₩ zz t | | | | |
| L | JL | | | | JĽ | t | | m | У | y m | | J | l | J |



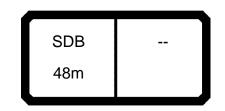
*** 220 074619 22.50 CODE >8064< V181 1A00 m > < t36,0 36,0 600,0 600,0 7,0 8,0 600,0 600,0 9,0 600,0 600,0 10,0 600,0 600,0 596,0 11,0 600,0 12,0 557,0 578,0 14,0 489,0 519,0 16,0 428,0 458,0 18,0 382,0 411,0 369,0 20,0 342,0 22,0 311,0 333,0 24,0 284,0 301,0 26,0 258,0 271,0 28,0 235,0 242,0 30,0 212,0 213,0 32,0 189,0 189,0 34,0 165,0 165,0 36,0 140,0 140,0 * n * 46 46 15,0 15,0 уу 300,0 350,0 ΖZ 0-40 m/s 12,8 12,8 14.0 x SDB 36m



| 0/4618 | , | | | | | | | | | | | 220 | | 22.50 |
|--------------|----------------|-----------------|----------------|----------------|----------------|----------------|----------------|-----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | | m | ı > < t | | CO | DE : | >806 | 55< | | | , | V18 | 1 1E | 300 |
| m m | 42,0 | 42,0 | 42,0 | 42,0 | 42,0 | 42,0 | 42,0 | 42,0 | 42,0 | 42,0 | 42,0 | 42,0 | 42,0 | 42,0 |
| 8,0 | 405,0 | 499,0 | 552,0 | 591,0 | 598,0 | 598,0 | 598,0 | 598,0 | 411,0 | 512,0 | 570,0 | 597,0 | 600,0 | 600,0 |
| 9,0 10,0 | 349,0 305,0 | 437,0 390,0 | 495,0 449,0 | 539,0 494,0 | 575,0 532,0 | 600,0 569,0 | 600,0 584,0 | 600,0 584,0 | 354,0 310,0 | 451,0 405,0 | 513,0 468,0 | 561,0 516,0 | 600,0 561,0 | 600,0 583,0 |
| 11,0 | 271,0 | 347,0 | 404,0 | 449,0 | 486,0 | 522,0 | 549,0 | 564,0 | 275,0 | 361,0 | 424,0 | 470,0 | 514,0 | 549,0 |
| 12,0 | 243,0 | 312,0 | 368,0 | 413,0 | 449,0 | 483,0 | 515,0 | 534,0 | 246,0 | 325,0 | 387,0 | 433,0 | 476,0 | 514,0 |
| 14,0 | 200,0 | 258,0 | 307,0 | 351,0 | 385,0 | 416,0 | 446,0 | 472,0 | 203,0 | 269,0 | 324,0 | 371,0 | 409,0 | 443,0 |
| 16,0 | 168,0 | 219,0 | 267,0 | 307,0 | 339,0 | 368,0 | 396,0 | 422,0 | 171,0 | 229,0 | 281,0 | 325,0 | 361,0 | 393,0 |
| 18,0 | 144,0 | 189,0 | 231,0 | 266,0 | 299,0 | 325,0 | 349,0 | 374,0 | 146,0 | 198,0 | 244,0 | 283,0 | 318,0 | 347,0 |
| 20,0 | 122,0 | 164,0 | 203,0 | 235,0 | 266,0 | 290,0 | 313,0 | 336,0 | 124,0 | 171,0 | 215,0 | 250,0 | 284,0 | 311,0 |
| 22,0 | 106,0 | 142,0 | 179,0 | 210,0 | 238,0 | 263,0 | 284,0 | 305,0 | 107,0 | 148,0 | 190,0 | 224,0 | 256,0 | 282,0 |
| 24,0 | 92,0 | 125,0 | 159,0 | 187,0 | 212,0 | 237,0 | 256,0 | 276,0 | 94,0 | 131,0 | 168,0 | 200,0 | 230,0 | 255,0 |
| 26,0 | 82,0 | 112,0 | 142,0 | 171,0 | 195,0 | 218,0 | 237,0 | 255,0 | 83,0 | 116,0 | 150,0 | 183,0 | 211,0 | 235,0 |
| 28,0 | 73,0 | 100,0 | 128,0 | 155,0 | 178,0 | 199,0 | 218,0 | 235,0 | 74,0 | 105,0 | 135,0 | 166,0 | 192,0 | 216,0 |
| 30,0 | 65,0 | 90,0 | 116,0 | 141,0 | 163,0 | 183,0 | 201,0 | 217,0 | 66,0 | 95,0 | 123,0 | 151,0 | 176,0 | 199,0 |
| 32,0 34,0 | 59,0 53,0 | 82,0 75.0 | 106,0 97,0 | 129,0 119,0 | 152,0 140,0 | 171,0 | 188,0 | 203,0 190,0 | 60,0 | 86,0 | 112,0 103,0 | 139,0 128,0 | 164,0 152,0 | 186,0 |
| 36,0 | 49,0 | 75,0 69,0 | 90,0 | 110,0 | 131,0 | 158,0 148,0 | 175,0 164,0 | 178,0 | 54,0 49,5 | 79,0 73,0 | 96,0 | 119,0 | 141,0 | 173,0 161,0 |
| 38,0 | 45,0 | 64,0 | 84,0 | 103,0 | 122,0 | 139,0 | 154,0 | 168,0 | 45,5 | 67,0 | 89,0 | 110,0 | 132,0 | 152,0 |
| 40,0 | 41,5 | 60,0 | 78,0 | 96,0 | 115,0 | 130,0 | 145,0 | 157,0 | 42,5 | 63,0 | 83,0 | 103,0 | 124,0 | 142,0 |
| | 71,0 | 00,0 | 70,0 | 30,0 | 110,0 | 100,0 | 140,0 | 107,0 | 72,0 | 00,0 | 00,0 | 100,0 | 124,0 | 142,0 |
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| * n * | 28 | 36 | 41 | 45 | 46 | 46 | 46 | 46 | 28 | 37 | 43 | 46 | 46 | 46 |
| | | | | | | | | | | | | | | |
| уу | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 15,0 | 15,0 | 15,0 | 15,0 | 15,0 | 15,0 |
| zz _ | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 | 300,0 | 350,0 | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 |
| | | | | | | | | | | | | | | |
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| 0-40 | | | | | | | | | | | | | | |
| | 100 | 10.0 | 40.0 | 100 | 400 | 10.0 | 10.0 | 40.0 | 10.0 | 10.0 | 100 | 10.0 | 10.0 | 100 |
| ⋓ m/s | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 |
| | | | | | | | | | | | | | | |
| | | | | | 7 | A | | 10 | Res | AD. | | | <u> </u> | |
| | 11 | SDB | | | | | 14 | 1.0 x | Ay I | | | | | |
| | | 42m | | | | 150 | | 14.0] [| | | | | | |
| | | - 7 4111 | [| | | t | | m^{T} | √ y | y m | | | | |
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| 074618 | <u>'</u> | | | | | | | | | | | 220 | | 22.50 |
|----------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---|---------------|-----|---------------|
| | MM | m | ı > < t | | CO | DE : | >806 | 55< | | | | V18 | 1 1 | B00 |
| m m m | 42,0 | 42,0 | 42,0 | 42,0 | 42,0 | 42,0 | 42,0 | 42,0 | 42,0 | 42,0 | | | | |
| 8,0 | 600,0 | 600,0 | 420,0 | 530,0 | 591,0 | 600,0 | 600,0 | 600,0 | 600,0 | 600,0 | | | | |
| 9,0 | 600,0 597,0 | 600,0 597,0 | 362,0 317,0 | 473,0 425,0 | 539,0 493,0 | 595,0 550,0 | 600,0 583,0 | 600,0 600,0 | 600,0 600,0 | 600,0 600,0 | | | | + |
| 11,0 | 577,0 | 577,0 | 281,0 | 379,0 | 449,0 | 503,0 | 549,0 | 590,0 | 590,0 | 590,0 | | | | |
| 12,0 | 546,0 | 553,0 | 252,0 | 344,0 | 412,0 | 464,0 | 513,0 | 561,0 | 569,0 | 569,0 | | | | |
| 14,0 | 477,0 | 504,0 | 208,0 | 286,0 | 348,0 | 398,0 | 442,0 | 486,0 | 520,0 | 522,0 | | | | |
| 16,0 | 425,0 | 454,0 | 175,0 | 243,0 | 303,0 | 351,0 | 391,0 | 432,0 | 468,0 | 477,0 | | | | |
| 18,0 | 376,0 | 404,0 | 149,0 | 211,0 | 263,0 | 308,0 | 346,0 | 381,0 | 416,0 | 433,0 | | | | |
| 20,0 | 338,0 | 364,0 | 127,0 | 181,0 | 231,0 | 274,0 | 309,0 | 342,0 | 374,0 | 397,0 | | | | |
| 22,0 | 307,0 | 331,0 | 110,0 | 157,0 | 205,0 | 246,0 | 280,0 | 310,0 | 340,0 | 365,0 | | | | |
| 24,0 | 277,0 | 299,0 | 96,0 | 139,0 | 181,0 | 220,0 | 252,0 | 281,0 | 308,0 | 335,0 | | | | |
| 26,0 | 257,0 | 277,0 | 85,0 | 124,0 | 162,0 | 201,0 | 233,0 | 260,0 | 286,0 | 311,0 | | | | |
| 28,0 30,0 | 236,0 | 255,0 | 76,0 | 111,0 | 147,0 | 182,0 | 214,0 | 239,0 | 263,0 | 287,0 | | | | |
| 32,0 | 218,0 204,0 | 236,0 221,0 | 68,0 61,0 | 101,0 92,0 | 133,0 122,0 | 166,0 152,0 | 197,0 183,0 | 220,0 206,0 | 244,0 228,0 | 263,0 241,0 | | | | |
| 34,0 | 190,0 | 207,0 | 56,0 | 84,0 | 112,0 | 141,0 | 169,0 | 192,0 | 213,0 | 219,0 | | | | |
| 36,0 | 178,0 | 193,0 | 51,0 | 78,0 | 104,0 | 131,0 | 157,0 | 180,0 | 196,0 | 198,0 | | | | |
| 38,0 | 168,0 | 180,0 | 47,0 | 72,0 | 97,0 | 122,0 | 147,0 | 169,0 | 177,0 | 178,0 | | | | |
| 40,0 | 158,0 | 166,0 | 43,5 | 67,0 | 91,0 | 114,0 | 138,0 | 157,0 | 157,0 | 157,0 | | | | |
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| * n * | 46 | 46 | 29 | 39 | 45 | 46 | 46 | 46 | 46 | 46 | | | | |
| | 45.0 | 45.0 | 40.0 | 40.0 | 40.0 | 40.0 | 40.0 | 40.0 | 40.0 | 40.0 | | | | |
| уу | 15,0 300,0 | 15,0 350,0 | 18,0 0,0 | 18,0 50,0 | 18,0 100,0 | 18,0 | 18,0 | 18,0 250,0 | 18,0 | 18,0 350,0 | | 1 | | |
| ZZ _ | 300,0 | 350,0 | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 | 300,0 | 330,0 | | | | |
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| o - ∦o | | | | | | | | | | | | | | |
| ⋓ m/s | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | | | | |
| | | | | | | | | | | | | | | |
| | | | | | 1 | | | | | A | | $\overline{}$ | | $\overline{}$ |
| | | SDB | | | | | 14 | 1.0 x | NO. | | 1 | | | |
| | | | | | | 150 | IIT | 4.0 | ₩ | | | | | |
| | | 42m | | | | † | | m A | ← | zz t y m | | | | |
| | | | | | | · | J | 111 | у: | , ,,, | L | J | L | J |



| 0/4618 | 2 | | | | | | | | | | | 220 | - | 22.50 |
|--------------|------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | | m | n > < t | | CO | DE : | >806 | 66< | | | • | V18 | 1 10 | 000 |
| m m | 48,0 | 48,0 | 48,0 | 48,0 | 48,0 | 48,0 | 48,0 | 48,0 | 48,0 | 48,0 | 48,0 | 48,0 | 48,0 | 48,0 |
| 9,0 10,0 | 1 ' | 420,0 370,0 | 491,0 443,0 | 531,0 483,0 | 568,0 520,0 | 585,0 555,0 | 585,0 569,0 | 585,0 569,0 | 334,0 294,0 | 437,0 386,0 | 508,0 459,0 | 554,0 506,0 | 583,0 548,0 | 598,0 578,0 |
| 11,0 | | 331,0 | 404,0 | 446,0 | 482,0 | 516,0 | 537,0 | 545,0 | 262,0 | 345,0 | 421,0 | 468,0 | 509,0 | 542,0 |
| 12,0 | | 298,0 | 365,0 | 409,0 | 444,0 | 478,0 | 504,0 | 519,0 | 236,0 | 311,0 | 383,0 | 429,0 | 470,0 | 505,0 |
| 14,0 | | 248,0 | 304,0 | 351,0 | 385,0 | 416,0 | 445,0 | 466,0 | 195,0 | 259,0 | 323,0 | 370,0 | 408,0 | 443,0 |
| 16,0 | | 211,0 | 260,0 | 299,0 | 332,0 | 360,0 | 388,0 | 413,0 | 165,0 | 220,0 | 274,0 | 318,0 | 353,0 | 384,0 |
| 18,0 20,0 | | 183,0 160,0 | 226,0 199,0 | 266,0 234,0 | 298,0 263,0 | 325,0 289,0 | 350,0 312,0 | 373,0 334,0 | 142,0 123,0 | 191,0 168,0 | 241,0 212,0 | 284,0 250,0 | 318,0 283,0 | 347,0 310,0 |
| 22,0 | | 142,0 | 177,0 | 207,0 | 235,0 | 260,0 | 281,0 | 302,0 | 107,0 | 148,0 | 189,0 | 222,0 | 253,0 | 279,0 |
| 24,0 | | 125,0 | 158,0 | 188,0 | 214,0 | 238,0 | 258,0 | 277,0 | 93,0 | 130,0 | 167,0 | 201,0 | 231,0 | 256,0 |
| 26,0 | | 111,0 | 141,0 | 169,0 | 193,0 | 215,0 | 235,0 | 252,0 | 82,0 | 116,0 | 149,0 | 181,0 | 208,0 | 232,0 |
| 28,0 | | 99,0 | 127,0 | 154,0 | 177,0 | 198,0 | 217,0 | 233,0 | 73,0 | 104,0 | 134,0 | 165,0 | 191,0 | 214,0 |
| 30,0 32,0 | 1 ' | 90,0 | 115,0 | 140,0 | 163,0 | 183,0 | 201,0 | 217,0 | 65,0 | 94,0 | 122,0 | 150,0 | 176,0 | 199,0 |
| 34,0 | | 81,0 74,0 | 105,0 96,0 | 128,0 118,0 | 150,0 138,0 | 169,0 156,0 | 186,0 173,0 | 201,0 188,0 | 59,0 53,0 | 85,0 78,0 | 111,0 102,0 | 138,0 127,0 | 162,0 150,0 | 184,0 171,0 |
| 36,0 | | 68,0 | 89,0 | 109,0 | 129,0 | 146,0 | 163,0 | 177,0 | 48,5 | 71,0 | 94,0 | 117,0 | 140,0 | 160,0 |
| 38,0 | | 63,0 | 82,0 | 101,0 | 120,0 | 136,0 | 152,0 | 166,0 | 44,0 | 66,0 | 87,0 | 109,0 | 130,0 | 150,0 |
| 40,0 | | 58,0 | 76,0 | 94,0 | 112,0 | 127,0 | 142,0 | 155,0 | 40,5 | 61,0 | 81,0 | 101,0 | 122,0 | 140,0 |
| 44,0 | , - | 50,0 | 66,0 | 83,0 | 99,0 | 113,0 | 127,0 | 140,0 | 34,5 | 53,0 | 71,0 | 89,0 | 108,0 | 125,0 |
| 48,0 | 29,0 | 44,0 | 59,0 | 74,0 | 89,0 | 102,0 | 113,0 | 123,0 | 29,8 | 46,5 | 63,0 | 80,0 | 96,0 | 110,0 |
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| * n * | 22 | 29 | 35 | 39 | 43 | 44 | 44 | 44 | 22 | 30 | 37 | 41 | 44 | 46 |
| | | | | | | | | | | | | • • • | | |
| уу _ | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 15,0 | 15,0 | 15,0 | 15,0 | 15,0 | 15,0 |
| ZZ _ | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 | 300,0 | 350,0 | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 |
| | | | | | | | | | | | | | | |
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| 0-40 | | | | | | | | | | | | | | |
| M | 40.5 | 40.5 | 40.5 | 40.5 | 40.5 | 40.0 | 40.0 | 40.0 | 40.0 | 40.5 | 40.0 | 40.0 | 40.5 | 40.5 |
| ⋓ m/s | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 |
| | | | | | | | | | | | | = | | $\overline{}$ |
| | | SDB | | | | <u>~</u> | 14 | 1.0 x | P | | | | | |
| | | SUB | | | IIF | 150 | | 14.0 | | | | | | |
| | | 48m | | | | 100 | | 14.0 👗 | ₩ ₩ | zz t | | | | |
| | | | | | JL | t | JL | m | У. | ý m | l | J | l | J |



| 074618 | , | | | | | | | | | | | 220 | | | .50 |
|--------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----|----------|-----|-----|-----|
| | | m | ı > < t | | CO | DE : | >806 | 66< | | | | V18 | 1 1 | ICC | 0 |
| m m m | 48,0 | 48,0 | 48,0 | 48,0 | 48,0 | 48,0 | 48,0 | 48,0 | 48,0 | 48,0 | | | | | |
| 9,0 | 598,0 | 598,0 | 342,0 | 464,0 | 533,0 | 577,0 | 600,0 | 600,0 | 600,0 | 600,0 | | | | | |
| 10,0 11,0 | 582,0 557,0 | 582,0 557,0 | 301,0 268,0 | 410,0 366,0 | 483,0 447,0 | 540,0 499,0 | 588,0 547,0 | 595,0 569,0 | 595,0 571,0 | 595,0 571,0 | | | - | | |
| 12,0 | 532,0 | 532,0 | 241,0 | 331,0 | 410,0 | 459,0 | 506,0 | 543,0 | 547,0 | 547,0 | | | | | |
| 14,0 | 475,0 | 488,0 | 199,0 | 275,0 | 350,0 | 398,0 | 442,0 | 483,0 | 502,0 | 506,0 | | | | | |
| 16,0 | 416,0 | 445,0 | 169,0 | 235,0 | 295,0 | 344,0 | 383,0 | 422,0 | 458,0 | 466,0 | | | | | |
| 18,0 20,0 | 376,0 | 403,0 | 145,0 | 204,0 | 262,0 | 308,0 | 345,0 | 381,0 | 415,0 | 430,0 | | | | | |
| 22,0 | 336,0 303,0 | 362,0 327,0 | 126,0 109,0 | 179,0 157,0 | 231,0 204,0 | 273,0 243,0 | 308,0 277,0 | 341,0 307,0 | 372,0 337,0 | 394,0 361,0 | | | | | |
| 24,0 | 278,0 | 301,0 | 95,0 | 138,0 | 181,0 | 221,0 | 253,0 | 282,0 | 309,0 | 334,0 | | | | | |
| 26,0 | 253,0 | 274,0 | 84,0 | 123,0 | 162,0 | 199,0 | 230,0 | 257,0 | 282,0 | 306,0 | | | | | |
| 28,0 | 234,0 | 254,0 | 75,0 | 110,0 | 146,0 | 181,0 | 212,0 | 237,0 | 261,0 | 284,0 | | | | | |
| 30,0 | 218,0 | 236,0 | 67,0 | 100,0 | 132,0 | 165,0 | 196,0 | 221,0 | 244,0 | 265,0 | | | | | |
| 32,0 34,0 | 202,0 188,0 | 219,0 205,0 | 60,0 55,0 | 91,0 83,0 | 121,0 111,0 | 151,0 139,0 | 181,0 168,0 | 204,0 190,0 | 226,0 211,0 | 246,0 229,0 | | | | | |
| 36,0 | 177,0 | 193,0 | 49,5 | 76,0 | 103,0 | 129,0 | 156,0 | 179,0 | 199,0 | 215,0 | | | | | |
| 38,0 | 166,0 | 181,0 | 45,5 | 70,0 | 95,0 | 120,0 | 145,0 | 168,0 | 187,0 | 201,0 | | | | | |
| 40,0 | 155,0 | 170,0 | 41,5 | 65,0 | 89,0 | 112,0 | 136,0 | 157,0 | 175,0 | 186,0 | | | | | |
| 44,0 | 140,0 | 153,0 | 35,5 | 57,0 | 78,0 | 99,0 | 120,0 | 141,0 | 151,0 | 154,0 | | | | | |
| 48,0 | 122,0 | 125,0 | 31,0 | 50,0 | 69,0 | 89,0 | 107,0 | 116,0 | 116,0 | 116,0 | | | | | |
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| * n * | 46 | 46 | 23 | 33 | 39 | 44 | 46 | 46 | 46 | 46 | | | | | |
| | 1 40 | 70 | 25 | - 55 | - 55 | | | | | | | | | | |
| уу — | 15,0 | 15,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | | | | | |
| ZZ | 300,0 | 350,0 | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 | 300,0 | 350,0 | | | | | |
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| 0 10 | | | | | | | | | | | | | - | + | |
| 0-40 | | | | | | | | | | | | | | | |
| ⋓ m/s | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | | | 1 | | |
| | | | | | | | | | | | _ | <u> </u> | | | _ |
| <u> </u> | | 000 | | | 7 | <u>A</u> | 1/ | 1.0 x | 18. | | ſ _ | | | | 1 |
| | | SDB | | | | 150 | | ^ | | | | | | | |
| | | 48m | | | | 150 | | 14.0 | ▋▋♥ | zz t | | | | | |
| | JL | | | | JL | t | JL | m | У | y m | l | J | l | | J |



| 0/4618 | 7 | | | | | | | | | | | 220 | | 22.50 |
|--------------|-------|----------------|----------------|----------------|----------------|----------------|----------------|---------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | | m | n > < t | | CO | DE : | >806 | 67< | | | , | V18 | 1 1 | 000 |
| m m | 54,0 | 54,0 | 54,0 | 54,0 | 54,0 | 54,0 | 54,0 | 54,0 | 54,0 | 54,0 | 54,0 | 54,0 | 54,0 | 54,0 |
| 9,0 10,0 | 1 ' 1 | 396,0 351,0 | 478,0 428,0 | 516,0 475,0 | 547,0 508,0 | 558,0 530,0 | 558,0 538,0 | 558,0 538,0 | 315,0 278,0 | 413,0 366,0 | 493,0 453,0 | 535,0 495,0 | 562,0 528,0 | 566,0 547,0 |
| 11,0 | | 314,0 | 384,0 | 436,0 | 471,0 | 501,0 | 515,0 | 515,0 | 249,0 | 328,0 | 408,0 | 456,0 | 495,0 | 524,0 |
| 12,0 | | 284,0 | 348,0 | 405,0 | 438,0 | 469,0 | 488,0 | 496,0 | 224,0 | 297,0 | 370,0 | 424,0 | 462,0 | 493,0 |
| 14,0 | 183,0 | 237,0 | 292,0 | 346,0 | 376,0 | 407,0 | 435,0 | 455,0 | 186,0 | 248,0 | 310,0 | 364,0 | 400,0 | 433,0 |
| 16,0 | | 202,0 | 250,0 | 297,0 | 333,0 | 360,0 | 386,0 | 409,0 | 157,0 | 211,0 | 266,0 | 319,0 | 353,0 | 384,0 |
| 18,0 | | 175,0 | 217,0 | 260,0 | 292,0 | 318,0 | 341,0 | 366,0 | 135,0 | 183,0 | 232,0 | 277,0 | 310,0 | 339,0 |
| 20,0 | | 154,0 136,0 | 192,0 171,0 | 230,0 205,0 | 263,0 234,0 | 288,0 259,0 | 310,0 280,0 | 333,0 300,0 | 118,0 103,0 | 161,0 143,0 | 204,0 182,0 | 248,0 221,0 | 281,0 252,0 | 308,0 278,0 |
| 24,0 | | 121,0 | 153,0 | 183,0 | 209,0 | 233,0 | 253,0 | 272,0 | 91,0 | 128,0 | 164,0 | 197,0 | 226,0 | 251,0 |
| 26,0 | , | 109,0 | 139,0 | 168,0 | 192,0 | 215,0 | 234,0 | 252,0 | 81,0 | 114,0 | 148,0 | 180,0 | 208,0 | 231,0 |
| 28,0 | | 98,0 | 125,0 | 152,0 | 174,0 | 196,0 | 215,0 | 231,0 | 71,0 | 102,0 | 133,0 | 163,0 | 189,0 | 212,0 |
| 30,0 | 1 ' 1 | 88,0 | 113,0 | 138,0 | 158,0 | 179,0 | 197,0 | 212,0 | 64,0 | 92,0 | 120,0 | 148,0 | 172,0 | 194,0 |
| 32,0 | | 79,0 | 103,0 | 127,0 | 147,0 | 167,0 | 184,0 | 199,0 | 57,0 | 83,0 | 109,0 | 136,0 | 160,0 | 182,0 |
| 34,0 36,0 | | 72,0 66,0 | 94,0 87,0 | 116,0 107,0 | 136,0 126,0 | 155,0 142,0 | 172,0 159,0 | 186,0 173,0 | 51,0 46,5 | 76,0 69,0 | 100,0 92,0 | 125,0 115,0 | 149,0 137,0 | 169,0 157,0 |
| 38,0 | | 61,0 | 80,0 | 99,0 | 117,0 | 133,0 | 149,0 | 163,0 | 40,5 | 64,0 | 92,0 85,0 | 107,0 | 128,0 | 146,0 |
| 40,0 | 1 ' 1 | 56,0 | 74,0 | 92,0 | 110,0 | 125,0 | 141,0 | 154,0 | 38,5 | 59,0 | 79,0 | 99,0 | 120,0 | 138,0 |
| 44,0 | 31,0 | 47,5 | 64,0 | 80,0 | 96,0 | 110,0 | 123,0 | 136,0 | 32,0 | 50,0 | 69,0 | 87,0 | 105,0 | 121,0 |
| 48,0 | | 41,5 | 56,0 | 71,0 | 86,0 | 99,0 | 111,0 | 124,0 | 26,5 | 43,5 | 60,0 | 77,0 | 94,0 | 109,0 |
| 52,0 | 21,9 | 36,5 | 50,0 | 64,0 | 77,0 | 89,0 | 100,0 | 112,0 | 22,6 | 38,5 | 54,0 | 69,0 | 84,0 | 98,0 |
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| * n * | 20 | 27 | 34 | 37 | 41 | 42 | 42 | 42 | 21 | 28 | 35 | 39 | 42 | 42 |
| | | | - | | | | | | | | | | | |
| уу _ | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 15,0 | 15,0 | 15,0 | 15,0 | 15,0 | 15,0 |
| ZZ _ | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 | 300,0 | 350,0 | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 |
| | | | | | | | | | | | | | | |
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| 0-40 | | | | | | | | | | | | | | |
| M | 400 | 40.0 | 40.0 | 400 | 400 | 40.0 | 40.0 | 40.0 | 40.0 | 40.0 | 40.0 | 40.0 | 40.0 | 40.0 |
| ⋓ m/s | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 |
| | | | | | | | | | | | | | | $\overline{}$ |
| | | SDB | | | 11 / | ~ | 14 | 1.0 x | M | | | | | |
| | | | | • | | 150 | IIT. | 4.0 | | | | | | |
| | 10 | 54m | | | | 100 | | ' ^{+.∪} ▲ | | zz t | | | | |
| | JL | | | | JL | τ | JL_ | m | У | ý m | l | J | l | J |



| 074618 | , | | | | | | | | | | | 220 | | 22. | <u> </u> |
|----------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---------------------------------------|----------------|---------------|----------|----------|-----|----------|
| | MM | m | ı > < t | | CO | DE : | >806 | 57< | - | 1 | | V18 | 1 1 | D0 | 0 |
| m m | 54,0 | 54,0 | 54,0 | 54,0 | 54,0 | 54,0 | 54,0 | 54,0 | 54,0 | 54,0 | | | | | |
| 9,0 | 566,0 | 566,0 | 322,0 | 438,0 | 516,0 | 562,0 | 575,0 | 575,0 | 575,0 | 575,0 | | | | | |
| 10,0 | 547,0 | 547,0 | 285,0 | 389,0 | 475,0 | 523,0 | 555,0 | 557,0 | 557,0 | 557,0 | | | | | |
| 11,0 | 527,0 | 527,0 | 254,0 | 349,0 | 436,0 | 486,0 | 530,0 | 538,0 | 538,0 | 538,0 | | | | | |
| 12,0 14,0 | 507,0 464,0 | 507,0 469,0 | 229,0 190,0 | 316,0 264,0 | 402,0 338,0 | 453,0 391,0 | 496,0 433,0 | 516,0 472,0 | 520,0 483,0 | 520,0 483,0 | | | | | |
| 16,0 | 414,0 | 431,0 | 161,0 | 225,0 | 290,0 | 345,0 | 383,0 | 420,0 | 444,0 | 452,0 | | | | | |
| 18,0 | 367,0 | 395,0 | 139,0 | 196,0 | 253,0 | 302,0 | 338,0 | 372,0 | 406,0 | 420,0 | | | | | |
| 20,0 | 335,0 | 360,0 | 121,0 | 172,0 | 224,0 | 272,0 | 307,0 | 339,0 | 371,0 | 389,0 | | | | | |
| 22,0 | 302,0 | 326,0 | 106,0 | 153,0 | 200,0 | 242,0 | 276,0 | 306,0 | 335,0 | 359,0 | | | | | |
| 24,0 | 273,0 | 296,0 | 94,0 | 137,0 | 179,0 | 216,0 | 249,0 | 277,0 | 304,0 | 330,0 | | | | | |
| 26,0 | 253,0 | 274,0 | 83,0 | 121,0 | 160,0 | 198,0 | 229,0 | 256,0 | 282,0 | 306,0 | | | | | |
| 28,0 | 233,0 | 252,0 | 73,0 | 109,0 | 144,0 | 180,0 | 210,0 | 235,0 | 259,0 | 282,0 | | | | | |
| 30,0 | 214,0 | 231,0 | 65,0 | 98,0 | 131,0 | 163,0 | 192,0 | 216,0 | 239,0 | 260,0 | | | | | |
| 32,0 34,0 | 200,0 | 217,0 | 59,0 | 89,0 | 119,0 | 150,0 | 179,0 | 202,0 | 224,0 | 245,0 | | | | | |
| 36,0 | 187,0 173,0 | 203,0 189,0 | 53,0 47,5 | 81,0 74,0 | 109,0 101,0 | 138,0 127,0 | 166,0 154,0 | 189,0 175,0 | 209,0 195,0 | 229,0 213,0 | | | | | |
| 38,0 | 163,0 | 178,0 | 43,5 | 68,0 | 93,0 | 118,0 | 143,0 | 165,0 | 183,0 | 201,0 | | | | | |
| 40,0 | 154,0 | 169,0 | 39,5 | 63,0 | 87,0 | 110,0 | 134,0 | 156,0 | 174,0 | 191,0 | | | | | |
| 44,0 | 137,0 | 150,0 | 33,0 | 54,0 | 75,0 | 97,0 | 118,0 | 138,0 | 154,0 | 170,0 | | | | | |
| 48,0 | 123,0 | 136,0 | 27,6 | 47,5 | 66,0 | 86,0 | 105,0 | 124,0 | 138,0 | 145,0 | | | | | |
| 52,0 | 112,0 | 122,0 | 23,5 | 42,0 | 59,0 | 77,0 | 95,0 | 112,0 | 118,0 | 118,0 | | | | | |
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| | 40 | 40 | 0.4 | | 0.7 | 40 | 40 | 40 | 40 | 40 | | | | | |
| * n * | 42 | 42 | 21 | 30 | 37 | 42 | 43 | 43 | 43 | 43 | | | | | |
| | 15,0 | 15,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | | | | | |
| yy | 300,0 | 350,0 | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 | 300,0 | 350,0 | | | | | |
| | 000,0 | 000,0 | 0,0 | 00,0 | 100,0 | 100,0 | 200,0 | 200,0 | 000,0 | 000,0 | | | | | |
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| a 1a | | | | | | | | | | | | | | | \dashv |
| 0 - ∦0 | | | | | | | | | | | | | | | |
| ⋓ m/s | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | | 1 | | | |
| L | | | | | | | | | | | | <u> </u> | <u> </u> | | |
| | | | | | 1 | | | | \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ | A. | $\overline{}$ | | | | 7 |
| | | SDB | | | | | 14 | 1.0 x | W. | | 1 | | | | |
| | | 54m | | | | 150 | IIT | 4.0 | ₩ | | | | | | |
| | | J4II) | | | | t | | m 🗂 | ▼ | ym zzt | 1 | | | | |
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| 0/4618 | , | | | | | | | | | | | 220 | | 22.50 |
|--------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-------------------|----------------|----------------|----------------|----------------|
| | | m | ı > < t | | CO | DE : | >806 | >86 | | | , | V18 | 1 1E | 00 |
| m m | 60,0 | 60,0 | 60,0 | 60,0 | 60,0 | 60,0 | 60,0 | 60,0 | 60,0 | 60,0 | 60,0 | 60,0 | 60,0 | 60,0 |
| 10,0 11,0 | 261,0 234,0 | 335,0 301,0 | 409,0 368,0 | 460,0 427,0 | 487,0 456,0 | 496,0 477,0 | 496,0 484,0 | 496,0 484,0 | 265,0 238,0 | 350,0 314,0 | 434,0 391,0 | 478,0 445,0 | 494,0 473,0 | 501,0 490,0 |
| 12,0 | 211,0 | 273,0 | 335,0 | 396,0 | 428,0 | 455,0 | 466,0 | 466,0 | 215,0 | 285,0 | 355,0 | 415,0 | 449,0 | 473,0 |
| 14,0 | 176,0 | 229,0 | 282,0 | 335,0 | 373,0 | 401,0 | 423,0 | 438,0 | 179,0 | 239,0 | 299,0 | 360,0 | 395,0 | 424,0 |
| 16,0 | 149,0 | 196,0 | 242,0 | 288,0 | 329,0 | 356,0 | 381,0 | 402,0 | 152,0 | 205,0 | 257,0 | 310,0 | 350,0 | 379,0 |
| 18,0 20,0 | 128,0 112,0 | 170,0 149,0 | 211,0 186,0 | 252,0 223,0 | 291,0 259,0 | 316,0 283,0 | 340,0 305,0 | 362,0 328,0 | 131,0 114,0 | 178,0 156,0 | 225,0 199,0 | 272,0 241,0 | 311,0 277,0 | 338,0 304,0 |
| 22,0 | 98,0 | 132,0 | 166,0 | 200,0 | 234,0 | 258,0 | 280,0 | 300,0 | 100,0 | 139,0 | 177,0 | 216,0 | 252,0 | 278,0 |
| 24,0 | 87,0 | 118,0 | 149,0 | 180,0 | 210,0 | 234,0 | 254,0 | 273,0 | 89,0 | 124,0 | 159,0 | 195,0 | 227,0 | 252,0 |
| 26,0 | 77,0 | 106,0 | 135,0 | 164,0 | 188,0 | 211,0 | 230,0 | 248,0 | 79,0 | 112,0 | 144,0 | 176,0 | 204,0 | 228,0 |
| 28,0 30,0 | 69,0 62,0 | 96,0 87,0 | 123,0 112,0 | 149,0 137,0 | 173,0 159,0 | 195,0 180,0 | 214,0 198,0 | 231,0 214,0 | 71,0 63,0 | 101,0 92,0 | 132,0 120,0 | 162,0 148,0 | 188,0 173,0 | 212,0 195,0 |
| 32,0 | 55,0 | 79,0 | 103,0 | 126,0 | 145,0 | 164,0 | 182,0 | 197,0 | 57,0 | 83,0 | 109,0 | 135,0 | 158,0 | 179,0 |
| 34,0 | | 72,0 | 94,0 | 116,0 | 135,0 | 152,0 | 170,0 | 184,0 | 51,0 | 75,0 | 100,0 | 124,0 | 147,0 | 167,0 |
| 36,0 | 45,0 | 65,0 | 86,0 | 107,0 | 126,0 | 143,0 | 159,0 | 173,0 | 46,0 | 69,0 | 92,0 | 115,0 | 137,0 | 157,0 |
| 38,0 40,0 | 40,5 36,5 | 60,0 55,0 | 79,0 73,0 | 99,0 91,0 | 117,0 107,0 | 133,0 123,0 | 149,0 138,0 | 163,0 152,0 | 41,5 37,5 | 63,0 58,0 | 85,0 78,0 | 106,0 99,0 | 127,0 118,0 | 146,0 135,0 |
| 44,0 | 30,0 | 55,0 46,5 | 63,0 | 80,0 | 95,0 | 109,0 | 123,0 | 136,0 | 31,0 | 49,5 | 68,0 | 99,0 86,0 | 104,0 | 121,0 |
| 48,0 | 24,6 | 40,0 | 55,0 | 70,0 | 84,0 | 96,0 | 109,0 | 122,0 | 25,3 | 42,5 | 59,0 | 76,0 | 92,0 | 107,0 |
| 52,0 | | 35,0 | 48,5 | 62,0 | 75,0 | 87,0 | 98,0 | 110,0 | 20,9 | 37,0 | 52,0 | 67,0 | 83,0 | 96,0 |
| 56,0 60,0 | 16,8 | 30,0 | 43,0 | 56,0 | 67,0 | 78,0 | 89,0 | 100,0 | 17,4 | 32,5 | 46,5 | 61,0 | 74,0 | 87,0 |
| 00,0 | 14,4 | 26,9 | 39,0 | 51,0 | 62,0 | 72,0 | 82,0 | 88,0 | 15,0 | 28,9 | 42,5 | 56,0 | 69,0 | 79,0 |
| | | | | | | | | | | | | | | |
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| * n * | 17 | 22 | 20 | 32 | 25 | 26 | 26 | 26 | 17 | 23 | 20 | 34 | 25 | 26 |
| " n " | 17 | 22 | 28 | 32 | 35 | 36 | 36 | 36 | 17 | 23 | 30 | 34 | 35 | 36 |
| уу — | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 15,0 | 15,0 | 15,0 | 15,0 | 15,0 | 15,0 |
| zz | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 | 300,0 | 350,0 | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 |
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| o -∤o | | | | | | | | | | | | | | |
| ■ m/s | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 |
| | | | | | | | | | | | | | | |
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| | | SDB | | | | | 14 | 1.0 x | Ay I | | | | | |
| | | 60m | | | | 150 | | 14.0 📘 | □ V | ₩ _{zz t} | | | | |
| l | JL | | | | JL | t | JL | m | У. | y m | l | J | l | J |



| 0/4019 | | | | | | | | | | | | 220 | | 22.50 |
|--------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---|---------------|-----|---------------|
| | MM | m | ı > < t | | CO | DE : | >806 | >86 | | | | V18 | 1 1 | E00 |
| m m | 60,0 | 60,0 | 60,0 | 60,0 | 60,0 | 60,0 | 60,0 | 60,0 | 60,0 | 60,0 | | | | |
| 10,0 | 501,0 | 501,0 | 272,0 | 371,0 | 461,0 | 491,0 | 502,0 | 502,0 | 502,0 | 502,0 | | | | |
| 11,0 | 490,0 | 490,0 | 244,0 | 334,0 | 425,0 | 466,0 | 495,0 | 498,0 | 498,0 | 498,0 | | | | |
| 12,0 | 477,0 | 477,0 | 220,0 | 303,0 | 387,0 | 440,0 | 478,0 | 487,0 | 487,0 | 487,0 | | | | |
| 14,0 | 446,0 | 449,0 | 183,0 | 255,0 | 326,0 | 385,0 | 425,0 | 452,0 | 460,0 | 460,0 | | | | |
| 16,0 | 407,0 | 418,0 | 156,0 | 218,0 | 281,0 | 340,0 | 378,0 | 412,0 | 429,0 | 434,0 | | | | |
| 18,0 20,0 | 365,0 329,0 | 386,0 354,0 | 134,0 117,0 | 190,0 167,0 | 246,0 217,0 | 301,0 268,0 | 337,0 302,0 | 369,0 333,0 | 396,0 364,0 | 408,0 381,0 | | | | |
| 22,0 | 301,0 | 325,0 | 103,0 | 149,0 | 194,0 | 240,0 | 276,0 | 305,0 | 334,0 | 354,0 | | | | |
| 24,0 | 274,0 | 296,0 | 91,0 | 133,0 | 175,0 | 217,0 | 250,0 | 277,0 | 304,0 | 327,0 | | | | |
| 26,0 | 248,0 | 269,0 | 81,0 | 120,0 | 159,0 | 195,0 | 226,0 | 252,0 | 277,0 | 302,0 | | | | |
| 28,0 | 232,0 | 251,0 | 73,0 | 108,0 | 144,0 | 179,0 | 209,0 | 234,0 | 259,0 | 281,0 | | | | |
| 30,0 | 215,0 | 233,0 | 65,0 | 98,0 | 130,0 | 163,0 | 193,0 | 217,0 | 240,0 | 261,0 | | | | |
| 32,0 | 198,0 | 215,0 | 58,0 | 88,0 | 119,0 | 149,0 | 177,0 | 199,0 | 221,0 | 241,0 | | | | |
| 34,0 | 185,0 | 201,0 | 52,0 | 81,0 | 109,0 | 137,0 | 164,0 | 187,0 | 208,0 | 226,0 | | | | |
| 36,0 | 174,0 | 190,0 | 47,0 | 74,0 | 100,0 | 127,0 | 153,0 | 176,0 | 196,0 | 214,0 | | | | |
| 38,0 | 163,0 | 178,0 | 42,5 | 68,0 | 93,0 | 117,0 | 142,0 | 165,0 | 183,0 | 201,0 | | | | |
| 40,0 | 152,0 | 166,0 | 38,5 | 62,0 | 86,0 | 109,0 | 133,0 | 154,0 | 171,0 | 188,0 | | | | |
| 44,0 | 136,0 | 150,0 | 32,0 | 53,0 | 74,0 | 96,0 | 117,0 | 138,0 | 154,0 | 170,0 | | | | |
| 48,0 | 121,0 | 134,0 | 26,3 | 46,0 | 65,0 | 85,0 | 104,0 | 122,0 | 138,0 | 153,0 | | | | |
| 52,0 | 110,0 | 122,0 | 21,8 | 40,5 | 58,0 | 75,0 | 93,0 | 111,0 | 126,0 | 134,0 | | | | |
| 56,0 | 99,0 | 111,0 | 18,3 | 35,5 | 52,0 | 68,0 | 84,0 | 100,0 | 114,0 | 115,0 | | | | |
| 60,0 | 86,0 | 94,0 | 15,9 | 32,0 | 47,5 | 62,0 | 75,0 | 84,0 | 86,0 | 86,0 | | | | |
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| * n * | 36 | 36 | 17 | 25 | 32 | 35 | 36 | 36 | 36 | 36 | | | | |
| | | | | | | | | | | | | | | |
| уу — | 15,0 | 15,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | | | | |
| ZZ | 300,0 | 350,0 | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 | 300,0 | 350,0 | | | | |
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| . 4- | | | | | | | | | | | | | | |
| o -∦o | | | | | | | | | | | | | | |
| m/s | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | _ | $\overline{}$ | _ | $\overline{}$ |
| | | SDB | | | | <u>~</u> | 14 | 1.0 x | N. | | | | | |
| | | | | | | 150 | IIT. | 4.0 | | | | | | |
| | | 60m | | | | .00 | | '*.º 👗 | | zz t | | | | |
| L | JL | | | | | t | IL | m | У | ý m | 1 | | l | |



| 074619 | | | | | | | | | | | | 220 | - 4 | 22.50 |
|-----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | MM | m | ı > < t | | CO | DE : | >806 | 59< | | | | V18 | 1 1F | -00 |
| m m | 66,0 | 66,0 | 66,0 | 66,0 | 66,0 | 66,0 | 66,0 | 66,0 | 66,0 | 66,0 | 66,0 | 66,0 | 66,0 | 66,0 |
| 10,0 | 225.0 | 200.0 | 254.0 | 439,0 | 442,0 | 442,0 | 442,0 | 442,0 | 220.0 | 202.0 | 276.0 | 443,0 | 443,0 | 443,0 |
| 11,0 12,0 | 225,0 204,0 | 289,0 263,0 | 354,0 323,0 | 413,0 382,0 | 426,0 409,0 | 436,0 430,0 | 436,0 435,0 | 436,0 435,0 | 229,0 207,0 | 302,0 275,0 | 376,0 343,0 | 422,0 401,0 | 434,0 426,0 | 434,0 438,0 |
| 14,0 | 170,0 | 221,0 | 273,0 | 324,0 | 367,0 | 391,0 | 405,0 | 414,0 | 173,0 | 232,0 | 290,0 | 349,0 | 386,0 | 406,0 |
| 16,0 | 145,0 | 190,0 | 235,0 | 280,0 | 322,0 | 348,0 | 371,0 | 389,0 | 147,0 | 199,0 | 250,0 | 302,0 | 342,0 | 369,0 |
| 18,0 | 125,0 | 165,0 | 205,0 | 246,0 | 286,0 | 314,0 | 337,0 | 355,0 | 127,0 | 173,0 | 219,0 | 265,0 | 309,0 | 335,0 |
| 20,0 | 109,0 | 145,0 | 182,0 | 218,0 | 254,0 | 281,0 | 302,0 | 322,0 | 111,0 | 152,0 | 194,0 | 235,0 | 275,0 | 301,0 |
| 22,0 24,0 | 96,0 | 129,0 | 162,0 | 195,0 | 228,0 207,0 | 255,0 | 276,0 | 295,0 | 97,0 | 135,0 | 173,0 | 211,0 | 249,0 | 274,0 |
| 26,0 | 85,0 75,0 | 115,0 103,0 | 146,0 132,0 | 176,0 160,0 | 188,0 | 234,0 213,0 | 254,0 232,0 | 272,0 249,0 | 86,0 77,0 | 121,0 109,0 | 156,0 141,0 | 191,0 173,0 | 225,0 206,0 | 252,0 230,0 |
| 28,0 | 67,0 | 94,0 | 120,0 | 146,0 | 170,0 | 192,0 | 210,0 | 226,0 | 69,0 | 99,0 | 129,0 | 159,0 | 185,0 | 208,0 |
| 30,0 | 60,0 | 85,0 | 110,0 | 134,0 | 158,0 | 179,0 | 197,0 | 212,0 | 62,0 | 90,0 | 118,0 | 146,0 | 172,0 | 194,0 |
| 32,0 | 54,0 | 77,0 | 100,0 | 124,0 | 146,0 | 165,0 | 183,0 | 198,0 | 55,0 | 82,0 | 108,0 | 135,0 | 159,0 | 180,0 |
| 34,0 | 49,0 | 71,0 | 93,0 | 114,0 | 134,0 | 152,0 | 169,0 | 184,0 | 50,0 | 75,0 | 100,0 | 124,0 | 146,0 | 167,0 |
| 36,0 | 44,0 | 65,0 | 85,0 | 106,0 | 123,0 | 140,0 | 157,0 | 171,0 | 45,5 | 68,0 | 91,0 | 114,0 | 134,0 | 154,0 |
| 38,0 40,0 | 40,0 | 60,0 | 79,0 | 98,0 | 116,0 | 132,0 | 148,0 | 162,0 | 41,0 | 63,0 | 84,0 | 106,0 | 126,0 | 145,0 |
| 44,0 | 36,0 29,3 | 55,0 46,0 | 73,0 63,0 | 91,0 79,0 | 108,0 93,0 | 123,0 107,0 | 139,0 121,0 | 153,0 134,0 | 37,0 30,0 | 57,0 49,0 | 78,0 67,0 | 98,0 85,0 | 118,0 103,0 | 136,0 118,0 |
| 48,0 | 29,3 | 39,5 | 54,0 | 69,0 | 83,0 | 96,0 | 108,0 | 121,0 | 24,4 | 49,0 | 58,0 | 75,0 | 92,0 | 106,0 |
| 52,0 | 19,0 | 33,5 | 47,5 | 61,0 | 73,0 | 85,0 | 97,0 | 108,0 | 19,7 | 36,0 | 51,0 | 67,0 | 81,0 | 95,0 |
| 56,0 | 15,3 | 28,7 | 42,0 | 54,0 | 66,0 | 77,0 | 87,0 | 98,0 | 15,9 | 31,0 | 45,5 | 59,0 | 73,0 | 85,0 |
| 60,0 | 12,2 | 24,7 | 37,0 | 49,0 | 59,0 | 69,0 | 79,0 | 89,0 | 12,8 | 26,7 | 40,5 | 54,0 | 66,0 | 78,0 |
| 64,0 | 9,9 | 21,5 | 33,0 | 44,0 | 53,0 | 63,0 | 72,0 | 82,0 | 10,4 | 23,4 | 36,5 | 48,5 | 60,0 | 71,0 |
| | | | | | | | | | | | | | | |
| * n * | 14 | 19 | 24 | 30 | 31 | 31 | 31 | 31 | 14 | 20 | 25 | 31 | 31 | 31 |
| уу — | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 15,0 | 15,0 | 15,0 | 15,0 | 15,0 | 15,0 |
| zz _ | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 | 300,0 | 350,0 | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 |
| _ | | | | | | | | | | | | | | |
| 0-40 m/s | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 |
| | | SDB 66m | | | | 150 t | | 4.0 x 14.0 m | ₩ Y | zz t | | | | |



| 074619 | | | | | | | | | | | 220 | | | 2.50 |
|------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|----------------|----------------|-----|-----|----------|------|
| | | m | > < t | 1 | CO | DE : | >806 | 59< | - | | V18 | 1 ' | 1F | 00 |
| ₽ m | 66,0 | 66,0 | 66,0 | 66,0 | 66,0 | 66,0 | 66,0 | 66,0 | 66,0 | 66,0 | | | | |
| 10,0 | 443,0 | 443,0 | | | 439,0 | 440,0 | 440,0 | 440,0 | 440,0 | 440,0 | | | \top | |
| 11,0 | 434,0 | 434,0 | 234,0 | 321,0 | 409,0 | 430,0 | 439,0 | 439,0 | 439,0 | 439,0 | | | | |
| 12,0 | 438,0 | 438,0 | 212,0 | 293,0 | 373,0 | 419,0 | 436,0 | 438,0 | 438,0 | 438,0 | | | | |
| 14,0 | 418,0 | 418,0 | 177,0 | 247,0 | 316,0 | 379,0 | 405,0 | 420,0 | 424,0 | 424,0 | | | \dashv | |
| 16,0 | 395,0 | 399,0 | 151,0 | 212,0 | 273,0 | 333,0 | 369,0 | 400,0 | 408,0 | 408,0 | | | | |
| 18,0 20,0 | 360,0 | 372,0 345,0 | 130,0 | 185,0 | 239,0 | 294,0 | 334,0 300,0 | 364,0 | 381,0 | 387,0 | | | _ | |
| 22,0 | 324,0 297,0 | 345,0 | 114,0 100,0 | 163,0 145,0 | 212,0 190,0 | 261,0 235,0 | 273,0 | 329,0 301,0 | 354,0 328,0 | 366,0 344,0 | | | | |
| 24,0 | 274,0 | 294,0 | 89,0 | 130,0 | 171,0 | 213,0 | 250,0 | 277,0 | 303,0 | 321,0 | | | + | |
| 26,0 | 250,0 | 270,0 | 79,0 | 117,0 | 155,0 | 194,0 | 228,0 | 253,0 | 278,0 | 299,0 | | | | |
| 28,0 | 228,0 | 246,0 | 71,0 | 106,0 | 142,0 | 176,0 | 206,0 | 231,0 | 254,0 | 277,0 | | | + | |
| 30,0 | 213,0 | 231,0 | 64,0 | 97,0 | 130,0 | 163,0 | 192,0 | 216,0 | 238,0 | 260,0 | | | | |
| 32,0 | 199,0 | 216,0 | 57,0 | 88,0 | 119,0 | 149,0 | 178,0 | 201,0 | 222,0 | 243,0 | | | | |
| 34,0 | 184,0 | 201,0 | 52,0 | 80,0 | 109,0 | 137,0 | 164,0 | 186,0 | 207,0 | 226,0 | | | | |
| 36,0 | 171,0 | 187,0 | 47,0 | 73,0 | 100,0 | 126,0 | 151,0 | 173,0 | 192,0 | 211,0 | | | | |
| 38,0 | 162,0 | 177,0 | 42,5 | 67,0 | 92,0 | 117,0 | 142,0 | 163,0 | 182,0 | 200,0 | | | \perp | |
| 40,0 | 153,0 | 167,0 | 38,5 | 62,0 | 85,0 | 109,0 | 132,0 | 154,0 | 172,0 | 189,0 | | | | |
| 44,0 | 134,0 | 147,0 | 31,5 | 53,0 | 74,0 | 95,0 | 116,0 | 135,0 | 152,0 | 167,0 | | | \perp | |
| 48,0 | 121,0 | 134,0 | 25,4 | 45,5 | 65,0 | 84,0 | 103,0 | 122,0 | 138,0 | 152,0 | | | | |
| 52,0 | 108,0 | 121,0 | 20,7 | 39,5 | 57,0 | 75,0 | 92,0 | 109,0 | 124,0 | 138,0 | | | + | |
| 56,0 60,0 | 98,0 | 110,0 | 16,8 | 34,0 | 51,0 | 67,0 | 83,0 | 99,0 | 113,0 | 123,0 | | | | |
| 64,0 | 89,0 81,0 | 101,0 92,0 | 13,6 11,2 | 29,7 26,2 | 45,5 41,0 | 60,0 55,0 | 75,0 69,0 | 90,0 82,0 | 104,0 90,0 | 108,0 91,0 | | | + | |
| - 1,0 | 01,0 | 32,0 | 11,2 | 20,2 | 41,0 | 33,0 | 00,0 | 02,0 | 30,0 | 31,0 | | | | |
| | | | | | | | | | | | | | + | |
| * n * | 31 | 31 | 15 | 21 | 30 | 31 | 31 | 31 | 31 | 31 | | | | |
| уу — | 15,0 | 15,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | | | \dashv | |
| zz _ | 300,0 | 350,0 | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 | 300,0 | 350,0 | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| o -∤o | | | | | | | | | | | | | | |
| ⋓ m/s | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | | | | |
| | | SDB 66m | | | | 150 t | | 4.0 x 14.0 m | | zz t | | | | |



| 074619 | 1 | | | | | | | | | | | 220 | | 22.50 |
|-----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | | m | ı > < t | | CO | DE : | >807 | 70< | | | | V18 | 1 20 | 000 |
| ■ m | 72,0 | 72,0 | 72,0 | 72,0 | 72,0 | 72,0 | 72,0 | 72,0 | 72,0 | 72,0 | 72,0 | 72,0 | 72,0 | 72,0 |
| 11,0 | 216,0 | 278,0 | 340,0 | 383,0 | 385,0 | 385,0 | 385,0 | 385,0 | 219,0 | 290,0 | 362,0 | 383,0 | 387,0 | 387,0 |
| 12,0 14,0 | 196,0 164,0 | 253,0 214,0 | 311,0 264,0 | 367,0 314,0 | 379,0 356,0 | 386,0 370,0 | 386,0 374,0 | 386,0 374,0 | 199,0 167,0 | 265,0 224,0 | 330,0 281,0 | 373,0 338,0 | 386,0 370,0 | 386,0 374,0 |
| 16,0 | 140,0 | 184,0 | 228,0 | 272,0 | 316,0 | 338,0 | 353,0 | 364,0 | 143,0 | 193,0 | 243,0 | 293,0 | 335,0 | 352,0 |
| 18,0 | 121,0 | 160,0 | 200,0 | 239,0 | 278,0 | 308,0 | 329,0 | 344,0 | 123,0 | 168,0 | 213,0 | 258,0 | 303,0 | 328,0 |
| 20,0 | 105,0 | 141,0 | 177,0 | 212,0 | 248,0 | 280,0 | 300,0 | 317,0 | 107,0 | 148,0 | 189,0 | 229,0 | 270,0 | 298,0 |
| 22,0 | 93,0 | 125,0 | 158,0 | 190,0 | 223,0 | 251,0 | 271,0 | 289,0 | 95,0 | 132,0 | 169,0 | 206,0 | 243,0 | 269,0 |
| 24,0 26,0 | 82,0 73,0 | 112,0 101,0 | 142,0 129,0 | 172,0 156,0 | 202,0 184,0 | 231,0 212,0 | 250,0 231,0 | 268,0 248,0 | 84,0 75,0 | 118,0 106,0 | 152,0 138,0 | 186,0 170,0 | 220,0 201,0 | 248,0 229,0 |
| 28,0 | 65,0 | 91,0 | 117,0 | 143,0 | 169,0 | 194,0 | 212,0 | 228,0 | 67,0 | 96,0 | 126,0 | 155,0 | 185,0 | 210,0 |
| 30,0 | 58,0 | 83,0 | 107,0 | 131,0 | 155,0 | 175,0 | 193,0 | 208,0 | 60,0 | 87,0 | 115,0 | 143,0 | 168,0 | 191,0 |
| 32,0 | 52,0 | 75,0 | 98,0 | 121,0 | 144,0 | 163,0 | 181,0 | 196,0 | 54,0 | 80,0 | 106,0 | 132,0 | 157,0 | 179,0 |
| 34,0 | 47,0 | 69,0 | 90,0 | 112,0 | 133,0 | 152,0 | 169,0 | 184,0 | 48,5 | 73,0 | 97,0 | 122,0 | 146,0 | 167,0 |
| 36,0 38,0 | 42,5 | 63,0 | 83,0 | 104,0 | 123,0 | 141,0 129,0 | 157,0 145,0 | 171,0 | 43,5 | 67,0 | 90,0 | 113,0 105,0 | 135,0 | 155,0 |
| 40,0 | 38,0 34,5 | 58,0 53,0 | 77,0 71,0 | 96,0 90,0 | 113,0 106,0 | 129,0 | 145,0 | 159,0 150,0 | 39,5 35,5 | 61,0 56,0 | 83,0 77,0 | 98,0 | 124,0 116,0 | 143,0 134,0 |
| 44,0 | 28,0 | 45,0 | 62,0 | 78,0 | 93,0 | 107,0 | 121,0 | 134,0 | 28,9 | 48,0 | 67,0 | 85,0 | 103,0 | 119,0 |
| 48,0 | 22,7 | 38,0 | 54,0 | 68,0 | 81,0 | 94,0 | 106,0 | 119,0 | 23,5 | 41,0 | 58,0 | 74,0 | 89,0 | 103,0 |
| 52,0 | 18,0 | 32,5 | 46,5 | 60,0 | 72,0 | 84,0 | 96,0 | 108,0 | 18,7 | 35,0 | 50,0 | 66,0 | 80,0 | 94,0 |
| 56,0 | 14,1 | 27,5 | 41,0 | 53,0 | 64,0 | 75,0 | 86,0 | 97,0 | 14,7 | 29,7 | 44,5 | 58,0 | 72,0 | 84,0 |
| 60,0 64,0 | 10,8 8,1 | 23,3 19,7 | 35,5 31,5 | 47,0 42,0 | 57,0 52,0 | 68,0 61,0 | 77,0 70,0 | 88,0 80,0 | 11,4 8,6 | 25,3 21,6 | 39,0 34,5 | 52,0 47,0 | 64,0 58,0 | 76,0 69,0 |
| 68,0 | 5,8 | 16,7 | 27,7 | 37,5 | 46,5 | 55,0 | 64,0 | 73,0 | 6,3 | 18,5 | 30,5 | 42,0 | 52,0 | 63,0 |
| 72,0 | 0,0 | 14,5 | 24,8 | 34,5 | 42,5 | 51,0 | 60,0 | 66,0 | 0,0 | 16,1 | 27,6 | 39,0 | 48,5 | 58,0 |
| | | | | | | | | | | | | | | |
| * n * | 14 | 18 | 22 | 26 | 26 | 26 | 26 | 26 | 14 | 19 | 24 | 26 | 26 | 26 |
| уу — | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 15,0 | 15,0 | 15,0 | 15,0 | 15,0 | 15,0 |
| zz — | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 | 300,0 | 350,0 | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 |
| | | | | | | | | | | | | | | |
| 0-40 m/s | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 |
| | | SDB 72m | | | | 150 t | | 1.0 x 14.0 m | ▼ y: | zz t | | | | |



| 074619 | | | | | | | | | | | | 220 | | 22.50 |
|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------------------|---|-----|-----|-------|
| | MM | m | ı > < t | | CO | DE : | >807 | 70< | | | | V18 | 1 2 | 2000 |
| Mary mary mary mary mary mary mary mary m | 72,0 | 72,0 | 72,0 | 72,0 | 72,0 | 72,0 | 72,0 | 72,0 | 72,0 | 72,0 | | | | |
| 11,0 | 387,0 | 387,0 | 225,0 | 309,0 | 380,0 | 385,0 | 385,0 | 385,0 | 385,0 | 385,0 | | | | |
| 12,0 14,0 | 386,0 374,0 | 386,0 374,0 | 204,0 171,0 | 282,0 239,0 | 360,0 306,0 | 383,0 365,0 | 383,0 372,0 | 383,0 372,0 | 383,0 372,0 | 383,0 372,0 | | | | |
| 16,0 | 368,0 | 369,0 | 146,0 | 206,0 | 265,0 | 325,0 | 351,0 | 371,0 | 374,0 | 374,0 | | | | |
| 18,0 | 349,0 | 354,0 | 127,0 | 180,0 | 233,0 | 286,0 | 326,0 | 354,0 | 362,0 | 362,0 | | | | |
| 20,0 | 320,0 | 332,0 | 111,0 | 159,0 | 207,0 | 255,0 | 297,0 | 324,0 | 341,0 | 347,0 | | | | |
| 22,0 | 291,0 | 310,0 | 97,0 | 141,0 | 185,0 | 229,0 | 267,0 | 295,0 | 320,0 | 331,0 | | | | |
| 24,0 26,0 | 269,0 249,0 | 289,0 269,0 | 86,0 77,0 | 127,0 114,0 | 167,0 152,0 | 208,0 189,0 | 246,0 227,0 | 273,0 253,0 | 298,0 277,0 | 312,0 293,0 | | | | |
| 28,0 | 230,0 | 248,0 | 69,0 | 104,0 | 139,0 | 174,0 | 208,0 | 233,0 | 255,0 | 274,0 | | | | |
| 30,0 | 210,0 | 227,0 | 62,0 | 94,0 | 127,0 | 160,0 | 188,0 | 212,0 | 234,0 | 255,0 | | | | |
| 32,0 | 197,0 | 214,0 | 56,0 | 86,0 | 117,0 | 148,0 | 176,0 | 200,0 | 220,0 | 240,0 | | | | |
| 34,0 | 184,0 | 200,0 | 50,0 | 79,0 | 108,0 | 137,0 | 164,0 | 187,0 | 207,0 | 226,0 | | | | |
| 36,0 | 172,0 | 187,0 | 45,5 | 73,0 | 100,0 | 126,0 | 152,0 | 174,0 | 193,0 | 211,0 | | | | |
| 38,0 40,0 | 159,0 150,0 | 174,0 165,0 | 41,0 37.0 | 67,0 | 92,0 85,0 | 117,0 108,0 | 140,0 131,0 | 162,0 152,0 | 180,0 170,0 | 197,0 187,0 | | | | |
| 44,0 | 134,0 | 148,0 | 37,0 30,5 | 61,0 52,0 | 73,0 | 94,0 | 116,0 | 136,0 | 152,0 | 168,0 | | | | |
| 48,0 | 118,0 | 131,0 | 24,6 | 44,5 | 64,0 | 83,0 | 102,0 | 119,0 | 135,0 | 150,0 | | | | |
| 52,0 | 107,0 | 120,0 | 19,7 | 38,5 | 56,0 | 74,0 | 91,0 | 108,0 | 123,0 | 137,0 | | | | |
| 56,0 | 97,0 | 109,0 | 15,6 | 33,0 | 49,5 | 66,0 | 82,0 | 98,0 | 112,0 | 125,0 | | | | |
| 60,0 | 87,0 | 99,0 | 12,2 | 28,3 | 44,0 | 59,0 | 74,0 | 88,0 | 102,0 | 113,0 | | | | |
| 64,0 68,0 | 80,0 | 91,0 | 9,4 | 24,4 | 39,5 | 53,0 | 67,0 | 81,0 | 93,0 | 101,0 | | | | |
| 72,0 | 73,0 64,0 | 83,0 69,0 | 7,1 | 21,1 18,6 | 35,0 32,0 | 48,5 45,0 | 61,0 55,0 | 74,0 61,0 | 84,0 65,0 | 88,0 65,0 | | | | |
| . 2,0 | 04,0 | 09,0 | | 10,0 | 32,0 | 43,0 | 33,0 | 01,0 | 00,0 | 00,0 | | | | + |
| | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | |
| * n * | 26 | 26 | 14 | 20 | 26 | 26 | 26 | 26 | 26 | 26 | | | | |
| - " | 20 | 20 | 1.7 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | | | | + |
| уу — | 15,0 | 15,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | | | | |
| ZZ | 300,0 | 350,0 | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 | 300,0 | 350,0 | | | | |
| | | | | | | | | | | | | | | |
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| - 1- | | | | | | | | | | | | | | |
| 0-∦0 | | | | | | | | | | | | | | |
| ⋓ m/s | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | | | | |
| | | | | | | | | | | | | | _ | |
| | | 6 | | | 7 | Ą | | 10 4 | Fig. | AD | | | | |
| | | SDB | | | | | 1 | 1.0 x | | | | | | |
| | | 72m | | | | 150 | | 14.0 📘 | | ₩ _{77 t} | | | | |
| l | JL | | | | JĽ | t | JL | m | У | y m | l | J | l | J |



| 074619 | | | | | | | | | | | | 220 | | 22.50 |
|-----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | MM | m | ı > < t | | CO | DE : | >807 | 71< | | | | V18 | 1 21 | 100 |
| m m m | 78,0 | 78,0 | 78,0 | 78,0 | 78,0 | 78,0 | 78,0 | 78,0 | 78,0 | 78,0 | 78,0 | 78,0 | 78,0 | 78,0 |
| 12,0 | 189,0 | 245,0 | 301,0 | 336,0 | 341,0 | 341,0 | 341,0 | 341,0 | 192,0 | 256,0 | 319,0 | 338,0 | 340,0 | 340,0 |
| 14,0 16,0 | 159,0 136,0 | 208,0 179,0 | 256,0 222,0 | 305,0 265,0 | 338,0 308,0 | 338,0 318,0 | 338,0 327,0 | 338,0 327,0 | 162,0 139,0 | 217,0 188,0 | 272,0 236,0 | 328,0 285,0 | 337,0 316,0 | 337,0 326,0 |
| 18,0 | 118,0 | 156,0 | 195,0 | 233,0 | 272,0 | 298,0 | 316,0 | 320,0 | 120,0 | 164,0 | 208,0 | 252,0 | 294,0 | 315,0 |
| 20,0 | 103,0 | 138,0 | 173,0 | 208,0 | 243,0 | 275,0 | 293,0 | 301,0 | 105,0 | 145,0 | 185,0 | 224,0 | 264,0 | 292,0 |
| 22,0 | 91,0 | 123,0 | 155,0 | 187,0 | 218,0 | 250,0 | 269,0 | 282,0 | 92,0 | 129,0 | 165,0 | 202,0 | 238,0 | 268,0 |
| 24,0 26,0 | 80,0 | 110,0 | 139,0 | 169,0 | 198,0 | 227,0 | 245,0 | 262,0 | 82,0 | 116,0 | 149,0 | 183,0 | 216,0 | 244,0 |
| 28,0 | 71,0 64,0 | 99,0 89,0 | 126,0 115,0 | 153,0 140,0 | 181,0 166,0 | 208,0 191,0 | 229,0 212,0 | 245,0 228,0 | 73,0 65,0 | 104,0 94,0 | 135,0 123,0 | 166,0 152,0 | 198,0 181,0 | 227,0 210,0 |
| 30,0 | 57,0 | 81,0 | 105,0 | 129,0 | 153,0 | 177,0 | 196,0 | 211,0 | 59,0 | 86,0 | 113,0 | 140,0 | 167,0 | 193,0 |
| 32,0 | 51,0 | 74,0 | 96,0 | 119,0 | 141,0 | 161,0 | 180,0 | 194,0 | 53,0 | 78,0 | 104,0 | 129,0 | 155,0 | 177,0 |
| 34,0 | 46,0 | 67,0 | 89,0 | 110,0 | 131,0 | 151,0 | 168,0 | 182,0 | 47,5 | 72,0 | 96,0 | 120,0 | 144,0 | 165,0 |
| 36,0 | 41,5 | 62,0 | 82,0 | 102,0 | 122,0 | 141,0 | 157,0 | 171,0 | 42,5 | 66,0 | 88,0 | 111,0 | 134,0 | 155,0 |
| 38,0 40,0 | 37,5 | 57,0 | 76,0 | 95,0 | 114,0 | 131,0 121,0 | 147,0 | 161,0 | 38,5 | 60,0 55,0 | 82,0 76,0 | 104,0 | 125,0 | 144,0 |
| 44,0 | 33,5 27,3 | 52,0 44,0 | 70,0 61,0 | 88,0 77,0 | 106,0 93,0 | 106,0 | 136,0 120,0 | 150,0 134,0 | 34,5 28,2 | 55,0 47,0 | 66,0 | 97,0 85,0 | 116,0 102,0 | 134,0 118,0 |
| 48,0 | 21,9 | 37,5 | 53,0 | 68,0 | 82,0 | 94,0 | 107,0 | 120,0 | 22,8 | 40,0 | 58,0 | 74,0 | 90,0 | 105,0 |
| 52,0 | 17,5 | 31,5 | 46,0 | 60,0 | 71,0 | 83,0 | 94,0 | 106,0 | 18,2 | 34,5 | 50,0 | 66,0 | 79,0 | 92,0 |
| 56,0 | 13,7 | 26,9 | 40,0 | 53,0 | 64,0 | 75,0 | 86,0 | 97,0 | 14,4 | 29,5 | 44,0 | 58,0 | 71,0 | 84,0 |
| 60,0 | 10,5 | 22,9 | 35,5 | 47,0 | 57,0 | 67,0 | 77,0 | 87,0 | 11,0 | 25,0 | 39,0 | 52,0 | 64,0 | 75,0 |
| 64,0 68,0 | 7,6 | 19,2 | 31,0 | 41,0 | 51,0 | 60,0 | 70,0 | 79,0 | 8,1 | 21,1 | 34,0 | 46,0 | 57,0 52.0 | 68,0 |
| 72,0 | 5,2 | 16,1 13,4 | 27,0 23,6 | 37,0 32,5 | 46,0 41,0 | 55,0 49,5 | 64,0 58,0 | 73,0 66,0 | 5,6 | 17,8 15,0 | 30,0 26,5 | 41,5 36,5 | 52,0 46,5 | 62,0 56,0 |
| 76,0 | | 11,2 | 20,9 | 29,2 | 37,0 | 45,0 | 53,0 | 61,0 | | 12,7 | 23,5 | 33,0 | 42,5 | 52,0 |
| | | | | | | | | | | | | | | |
| * n * | 12 | 16 | 20 | 22 | 23 | 23 | 23 | 23 | 12 | 16 | 21 | 22 | 22 | 22 |
| уу — | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 15,0 | 15,0 | 15,0 | 15,0 | 15,0 | 15,0 |
| zz | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 | 300,0 | 350,0 | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 |
| | | | | | | | | | | | | | | |
| _ | | | | | | | | | | | | | | |
| - 40 | | | | | | | | | | | | | | |
| 0-40 m/s | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 |
| | | SDB 78m | | | | 150 t | | 4.0 x 14.0 m | ▼ y | zz t | | | | |



| 074619 | | | | | | | | | | | | 220 | | 22.50 |
|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---|-----|-----|---------------|
| | MM | m | ı > < t | | CO | DE : | >807 | 71< | | | | V18 | 1 2 | 100 |
| m m | 78,0 | 78,0 | 78,0 | 78,0 | 78,0 | 78,0 | 78,0 | 78,0 | 78,0 | 78,0 | | | | |
| 12,0 | 340,0 | 340,0 | 197,0 | 273,0 | 333,0 | 338,0 | 338,0 | 338,0 | 338,0 | 338,0 | | | | |
| 14,0 | 337,0 | 337,0 | 166,0 | 232,0 | 297,0 | 336,0 | 336,0 | 336,0 | 336,0 | 336,0 | | | | |
| 16,0 18,0 | 331,0 325,0 | 331,0 325,0 | 142,0 123,0 | 200,0 175,0 | 258,0 227,0 | 312,0 279,0 | 325,0 314,0 | 332,0 329,0 | 332,0 329,0 | 332,0 329,0 | | | | |
| 20,0 | 306,0 | 312,0 | 108,0 | 155,0 | 202,0 | 250,0 | 291,0 | 310,0 | 317,0 | 317,0 | | | | + |
| 22,0 | 285,0 | 297,0 | 95,0 | 138,0 | 182,0 | 225,0 | 266,0 | 289,0 | 304,0 | 305,0 | | | | |
| 24,0 | 264,0 | 282,0 | 85,0 | 124,0 | 164,0 | 204,0 | 241,0 | 268,0 | 290,0 | 293,0 | | | | |
| 26,0 | 247,0 | 264,0 | 75,0 | 112,0 | 149,0 | 186,0 | 223,0 | 250,0 | 272,0 | 278,0 | | | | |
| 28,0 | 229,0 | 247,0 | 67,0 | 102,0 | 136,0 | 171,0 | 205,0 | 232,0 | 254,0 | 263,0 | | | | |
| 30,0 | 212,0 | 229,0 | 61,0 | 93,0 | 125,0 | 157,0 | 190,0 | 215,0 | 236,0 | 249,0 | | | | |
| 32,0 | 194,0 | 211,0 | 54,0 | 85,0 | 115,0 | 146,0 | 174,0 | 197,0 | 218,0 | 234,0 | | | | |
| 34,0 36,0 | 183,0 | 199,0 | 49,0 | 78,0 | 106,0 | 135,0 | 163,0 | 185,0 | 205,0 | 222,0 | | | | |
| 38,0 | 172,0 161,0 | 187,0 176,0 | 44,5 40,0 | 72,0 66,0 | 99,0 92,0 | 126,0 117,0 | 152,0 142,0 | 174,0 163,0 | 193,0 181,0 | 210,0 198,0 | | | | |
| 40,0 | 150,0 | 165,0 | 36,0 | 61,0 | 85,0 | 109,0 | 132,0 | 152,0 | 170,0 | 186,0 | | | | + |
| 44,0 | 134,0 | 147,0 | 29,6 | 52,0 | 73,0 | 95,0 | 116,0 | 135,0 | 152,0 | 167,0 | | | | |
| 48,0 | 120,0 | 133,0 | 24,0 | 44,5 | 64,0 | 83,0 | 102,0 | 120,0 | 137,0 | 151,0 | | | | 1 |
| 52,0 | 106,0 | 118,0 | 19,4 | 38,5 | 56,0 | 74,0 | 90,0 | 106,0 | 122,0 | 135,0 | | | | |
| 56,0 | 96,0 | 108,0 | 15,4 | 32,5 | 49,5 | 66,0 | 82,0 | 97,0 | 112,0 | 125,0 | | | | |
| 60,0 | 87,0 | 99,0 | 11,9 | 27,9 | 44,0 | 59,0 | 74,0 | 88,0 | 102,0 | 114,0 | | | | |
| 64,0 | 79,0 | 90,0 | 8,9 | 23,9 | 39,0 | 53,0 | 66,0 | 79,0 | 93,0 | 104,0 | | | | |
| 68,0 | 72,0 | 82,0 | 6,4 | 20,4 | 34,5 | 48,0 | 61,0 | 73,0 | 85,0 | 94,0 | | | | |
| 72,0 | 66,0 | 75,0 | | 17,5 | 30,5 | 43,0 | 55,0 | 67,0 | 78,0 | 85,0 | | | | |
| 76,0 | 61,0 | 70,0 | | 15,1 | 27,5 | 39,5 | 51,0 | 61,0 | 71,0 | 71,0 | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| * n * | 22 | 22 | 12 | 17 | 22 | 22 | 22 | 22 | 22 | 22 | | | | |
| " | | | 12 | - ' ' | | | | | | | | | | + - |
| уу — | 15,0 | 15,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | | | | 1 |
| zz _ | 300,0 | 350,0 | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 | 300,0 | 350,0 | | | | |
| | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | |
| 0-40 | | | | | | | | | | | | | | |
| m/s | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | | | | |
| W 111/3 | ,0 | ,0 | ,0 | ,0 | ,0 | ,0 | ,0 | ,0 | .2,0 | .2,0 | | | | |
| | | | | | | | | | | | | | _ | $\overline{}$ |
| | | SDB 78m | | | | 150 | | 4.0 x | | | | | | |
| l | JL | . 51 | | | JL | t | | m | У | y m | l | J | l | J |



| 074619 | | | | | | | | | | | | 220 | | 22.50 |
|--------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | | m | ı > < t | | CO | DE : | >807 | 72< | | | | V18 | 1 22 | 200 |
| ₽ m | 84,0 | 84,0 | 84,0 | 84,0 | 84,0 | 84,0 | 84,0 | 84,0 | 84,0 | 84,0 | 84,0 | 84,0 | 84,0 | 84,0 |
| 12,0 14,0 | 179,0 151,0 | 233,0 198,0 | 287,0 245,0 | 301,0 293,0 | 301,0 300,0 | 301,0 300,0 | 301,0 300,0 | 301,0 300,0 | 182,0 154,0 | 244,0 208,0 | 300,0 261,0 | 300,0 299,0 | 300,0 299,0 | 300,0 299,0 |
| 16,0 | 129,0 | 171,0 | 213,0 | 255,0 | 287,0 | 291,0 | 291,0 | 291,0 | 132,0 | 179,0 | 227,0 | 275,0 | 289,0 | 294,0 |
| 18,0 | 112,0 | 150,0 | 187,0 | 225,0 | 263,0 | 280,0 | 291,0 | 292,0 | 114,0 | 157,0 | 200,0 | 243,0 | 276,0 | 289,0 |
| 20,0 | 98,0 | 132,0 | 166,0 | 200,0 | 235,0 | 266,0 | 282,0 | 285,0 | 100,0 | 139,0 | 178,0 | 217,0 | 256,0 | 280,0 |
| 22,0 | 86,0 | 117,0 | 149,0 | 180,0 | 211,0 | 243,0 | 261,0 | 269,0 | 88,0 | 123,0 | 159,0 | 195,0 | 231,0 | 260,0 |
| 24,0 | 76,0 | 105,0 | 134,0 | 163,0 | 192,0 | 221,0 | 241,0 | 253,0 | 78,0 | 111,0 | 144,0 | 177,0 | 210,0 | 239,0 |
| 26,0 | 67,0 | 94,0 | 121,0 | 148,0 | 175,0 | 202,0 | 222,0 | 238,0 | 69,0 | 100,0 | 130,0 | 161,0 | 192,0 | 220,0 |
| 28,0 | 60,0 | 85,0 | 110,0 | 135,0 | 161,0 | 186,0 | 208,0 | 223,0 | 62,0 | 90,0 | 119,0 | 147,0 | 176,0 | 205,0 |
| 30,0 | 54,0 | 77,0 | 101,0 | 124,0 | 148,0 | 171,0 | 193,0 | 208,0 | 55,0 | 82,0 | 109,0 | 136,0 | 162,0 | 189,0 |
| 32,0 34,0 | 48,0 43,0 | 70,0 64,0 | 92,0 85,0 | 115,0 106,0 | 137,0 127,0 | 159,0 148,0 | 179,0 164,0 | 193,0 179,0 | 49,5 44,0 | 75,0 68,0 | 100,0 92,0 | 125,0 116,0 | 150,0 140,0 | 176,0 161,0 |
| 36,0 | 38,5 | 58,0 | 78,0 | 98,0 | 118,0 | 137,0 | 154,0 | 168,0 | 39,5 | 62,0 | 85,0 | 108,0 | 130,0 | 151,0 |
| 38,0 | 34,5 | 53,0 | 72,0 | 91,0 | 110,0 | 129,0 | 144,0 | 159,0 | 35,5 | 57,0 | 79,0 | 100,0 | 122,0 | 142,0 |
| 40,0 | 31,0 | 49,0 | 67,0 | 85,0 | 103,0 | 120,0 | 135,0 | 149,0 | 32,0 | 52,0 | 73,0 | 93,0 | 114,0 | 133,0 |
| 44,0 | 24,6 | 41,0 | 58,0 | 74,0 | 90,0 | 103,0 | 117,0 | 131,0 | 25,5 | 44,5 | 63,0 | 82,0 | 99,0 | 115,0 |
| 48,0 | 19,4 | 34,5 | 49,5 | 65,0 | 80,0 | 92,0 | 105,0 | 118,0 | 20,2 | 37,5 | 55,0 | 72,0 | 88,0 | 103,0 |
| 52,0 | 15,0 | 29,1 | 43,0 | 57,0 | 70,0 | 82,0 | 94,0 | 105,0 | 15,8 | 32,0 | 48,0 | 64,0 | 78,0 | 92,0 |
| 56,0 | 11,3 | 24,4 | 37,5 | 51,0 | 61,0 | 72,0 | 83,0 | 93,0 | 12,0 | 26,9 | 42,0 | 56,0 | 69,0 | 81,0 |
| 60,0 | 8,1 | 20,4 | 32,5 | 45,0 | 55,0 | 65,0 | 75,0 | 86,0 | 8,8 | 22,8 | 37,0 | 50,0 | 62,0 | 74,0 |
| 64,0 | 5,3 | 16,9 | 28,5 | 39,5 | 49,0 | 59,0 | 68,0 | 78,0 | 6,0 | 19,2 | 32,5 | 44,5 | 55,0 | 67,0 |
| 68,0 72,0 | | 14,0 | 24,9 | 34,5 | 43,5 | 52,0 | 61,0 | 70,0 | | 16,0 | 28,2 | 39,0 | 49,0 | 60,0 |
| 72,0 76,0 | | 11,4 | 21,8 | 30,5 | 39,5 | 47,5 | 56,0 | 65,0 | | 13,1 | 24,6 | 35,0 | 45,0 | 55,0 |
| 80,0 | | 9,1 7,1 | 18,8 16,3 | 26,9 23,7 | 35,0 31,5 | 43,0 39,0 | 51,0 46,5 | 59,0 54,0 | | 10,7 8,6 | 21,5 18,8 | 31,0 27,7 | 40,5 36,5 | 49,5 45,5 |
| 84,0 | | 5,6 | 14,3 | 21,6 | 29,0 | 36,5 | 43,5 | 50,0 | | 7,0 | 16,7 | 25,4 | 34,0 | 42,5 |
| - ,- | | 0,0 | 17,0 | 21,0 | 20,0 | 00,0 | 40,0 | 00,0 | | 7,0 | 10,1 | 20,4 | 04,0 | 72,0 |
| | | | | | | | | | | | | | | |
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| * n * | 11 | 15 | 18 | 20 | 20 | 20 | 20 | 20 | 11 | 15 | 19 | 19 | 19 | 19 |
| " | - ' ' | 10 | 10 | 20 | 20 | 20 | 20 | 20 | - ' ' | 10 | 10 | 10 | 10 | 10 |
| уу — | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 15,0 | 15,0 | 15,0 | 15,0 | 15,0 | 15,0 |
| zz | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 | 300,0 | 350,0 | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 |
| | | | | | | | | | | | | | | |
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| 0-40 | | | | | | | | | | | | | | |
| M | , | 45.5 | 45.5 | 45.5 | 4.5. | 45.5 | 45.5 | 45.5 | 45.5 | 45.5 | 45.5 | 45.5 | 45.5 | 40- |
| U m/s | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 |
| | | | | | | | | | | | | | | |
| | | | | | זר | A | ור | 1.0 | Res | AD. | | | | |
| | | SDB | | | | | | 4.0 x | Ay . | | | | | |
| | | 84m | | | | 150 | | 14.0 | | W | | | | |
| | | | | | | t | | m^{T} | √ y: | y m | | | | |
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| 074619 | <u>'</u> | | | | | | | | | | | 220 | | 22.50 |
|--------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------|-----|-----------|-----------|
| | MM | m | ı > < t | | CO | DE : | >807 | 72< | | | | V18 | 1 2 | 2200 |
| m m | 84,0 | 84,0 | 84,0 | 84,0 | 84,0 | 84,0 | 84,0 | 84,0 | 84,0 | 84,0 | | | | |
| 12,0 | 300,0 | 300,0 | 187,0 | 260,0 | 297,0 | 298,0 | 298,0 | 298,0 | 298,0 | 298,0 | | | | |
| 14,0 | 299,0 | 299,0 | 158,0 | 221,0 | 285,0 | 296,0 | 296,0 | 296,0 | 296,0 | 296,0 | | | | |
| 16,0 18,0 | 294,0 293,0 | 294,0 293,0 | 135,0 117,0 | 192,0 168,0 | 248,0 219,0 | 286,0 270,0 | 293,0 289,0 | 293,0 292,0 | 293,0 292,0 | 293,0 292,0 | | | | |
| 20,0 | 286,0 | 286,0 | 103,0 | 149,0 | 195,0 | 241,0 | 280,0 | 286,0 | 286,0 | 286,0 | | | | |
| 22,0 | 270,0 | 278,0 | 90,0 | 133,0 | 175,0 | 217,0 | 259,0 | 271,0 | 280,0 | 281,0 | | | | |
| 24,0 | 255,0 | 268,0 | 80,0 | 119,0 | 158,0 | 197,0 | 236,0 | 257,0 | 272,0 | 274,0 | | | | |
| 26,0 | 239,0 | 256,0 | 71,0 | 108,0 | 144,0 | 180,0 | 217,0 | 243,0 | 262,0 | 266,0 | | | | |
| 28,0 | 224,0 | 241,0 | 64,0 | 98,0 | 131,0 | 165,0 | 199,0 | 227,0 | 247,0 | 253,0 | | | | |
| 30,0 | 209,0 | 226,0 | 57,0 | 89,0 | 121,0 | 152,0 | 184,0 | 212,0 | 232,0 | 241,0 | | | | |
| 32,0 | 194,0 | 210,0 | 51,0 | 81,0 | 111,0 | 141,0 | 171,0 | 196,0 | 216,0 | 229,0 | | | | |
| 34,0 36,0 | 179,0 168,0 | 195,0 183,0 | 46,0 41,5 | 74,0 68,0 | 103,0 95,0 | 131,0 122,0 | 159,0 148,0 | 181,0 170,0 | 201,0 189,0 | 217,0 206,0 | | | | |
| 38,0 | 159,0 | 173,0 | 37,0 | 63,0 | 88,0 | 114,0 | 139,0 | 160,0 | 179,0 | 195,0 | | | | |
| 40,0 | 149,0 | 163,0 | 33,5 | 58,0 | 82,0 | 106,0 | 130,0 | 151,0 | 169,0 | 185,0 | | | | |
| 44,0 | 130,0 | 144,0 | 26,9 | 49,0 | 71,0 | 93,0 | 112,0 | 132,0 | 148,0 | 164,0 | | | | |
| 48,0 | 117,0 | 130,0 | 21,5 | 42,0 | 62,0 | 82,0 | 101,0 | 118,0 | 135,0 | 149,0 | | | | |
| 52,0 | 105,0 | 118,0 | 16,9 | 36,0 | 55,0 | 72,0 | 90,0 | 106,0 | 122,0 | 135,0 | | | | |
| 56,0 | 93,0 | 105,0 | 13,1 | 31,0 | 48,0 | 64,0 | 79,0 | 94,0 | 109,0 | 122,0 | | | | |
| 60,0 | 85,0 | 97,0 | 9,8 | 26,2 | 42,5 | 57,0 | 72,0 | 86,0 | 100,0 | 112,0 | | | | |
| 64,0 68,0 | 77,0 | 88,0 | 6,9 | 22,1 | 37,0 | 52,0 | 65,0 | 78,0 | 91,0 | 103,0 | | | | |
| 72,0 | 70,0 64,0 | 80,0 74,0 | | 18,6 15,6 | 32,5 28,8 | 46,0 41,5 | 58,0 53,0 | 70,0 65,0 | 83,0 77,0 | 94,0 85,0 | | | | |
| 76,0 | 59,0 | 68,0 | | 13,0 | 25,5 | 37,5 | 48,5 | 59,0 | 70,0 | 77,0 | | | | |
| 80,0 | 54,0 | 63,0 | | 10,8 | 22,6 | 33,5 | 44,0 | 55,0 | 64,0 | 67,0 | | | | 1 |
| 84,0 | 48,0 | 52,0 | | 9,1 | 20,3 | 31,0 | 40,5 | 45,0 | 48,5 | 48,5 | | | | |
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| * n * | 19 | 19 | 12 | 17 | 19 | 19 | 19 | 19 | 19 | 19 | | | | |
| | | | | | | | | | | | | | | |
| уу | 15,0 | 15,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | | | | |
| ZZ | 300,0 | 350,0 | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 | 300,0 | 350,0 | | | | |
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| 0-40 | | | | | | | | | | | | | | |
| m/s | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | | | | |
| | | | | | | | | | | | | | | |
| | | SDB | | | 1 | · | 14 | 1.0 x | No. | | \bigcap | | \bigcap | \bigcap |
| | | | | • | | 150 | IIT | 4.0 | | | | | | |
| | | 84m | | | | 100 | | 14.U I | I | zz t | | | | |
| l | JL | | | | JL | t | JL | m | У. | y m | l | J | l | J |



| 074619 | <u>'</u> | | | | | | | | | | | 220 | - 4 | 22.50 |
|--------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------------------|----------------|----------------|----------------|----------------|
| | MM | m | ı > < t | | CO | DE : | >807 | 73< | | | | V18 | 1 23 | 300 |
| m m m | 90,0 | 90,0 | 90,0 | 90,0 | 90,0 | 90,0 | 90,0 | 90,0 | 90,0 | 90,0 | 90,0 | 90,0 | 90,0 | 90,0 |
| 14,0 16,0 | 145,0 124,0 | 191,0 165,0 | 237,0 206,0 | 270,0 247,0 | 270,0 266,0 | 270,0 267,0 | 270,0 267,0 | 270,0 267,0 | 148,0 127,0 | 200,0 173,0 | 252,0 220,0 | 269,0 265,0 | 269,0 266,0 | 269,0 266,0 |
| 18,0 | 108,0 | 144,0 | 181,0 | 218,0 | 252,0 | 260,0 | 265,0 | 265,0 | 110,0 | 152,0 | 194,0 | 236,0 | 258,0 | 265,0 |
| 20,0 | 94,0 | 127,0 | 161,0 | 195,0 | 228,0 | 253,0 | 263,0 | 263,0 | 96,0 | 134,0 | 172,0 | 211,0 | 249,0 | 263,0 |
| 22,0 | 83,0 | 113,0 | 144,0 | 175,0 | 206,0 | 237,0 | 250,0 | 253,0 | 84,0 | 119,0 | 154,0 | 190,0 | 225,0 | 250,0 |
| 24,0 | 73,0 | 101,0 | 130,0 | 158,0 | 187,0 | 215,0 | 234,0 | 241,0 | 74,0 | 107,0 | 139,0 | 172,0 | 204,0 | 233,0 |
| 26,0 | 65,0 | 91,0 | 118,0 | 144,0 | 170,0 | 197,0 | 217,0 | 229,0 | 66,0 | 96,0 | 126,0 | 157,0 | 187,0 | 216,0 |
| 28,0 | 57,0 | 82,0 | 107,0 | 132,0 | 156,0 | 181,0 | 203,0 | 217,0 | 59,0 | 87,0 | 115,0 | 143,0 | 172,0 | 200,0 |
| 30,0 32,0 | 51,0 45,5 | 74,0 67,0 | 98,0 89,0 | 121,0 111,0 | 144,0 133,0 | 167,0 155,0 | 190,0 177,0 | 204,0 191,0 | 52,0 47,0 | 79,0 72,0 | 105,0 97,0 | 132,0 122,0 | 158,0 147,0 | 185,0 171,0 |
| 34,0 | 40,5 | 61,0 | 82,0 | 103,0 | 123,0 | 144,0 | 164,0 | 178,0 | 42,0 | 65,0 | 89,0 | 113,0 | 136,0 | 160,0 |
| 36,0 | 36,0 | 56,0 | 75,0 | 95,0 | 115,0 | 134,0 | 151,0 | 165,0 | 37,5 | 60,0 | 82,0 | 104,0 | 127,0 | 148,0 |
| 38,0 | 32,5 | 51,0 | 70,0 | 88,0 | 107,0 | 126,0 | 141,0 | 155,0 | 33,5 | 55,0 | 76,0 | 97,0 | 118,0 | 138,0 |
| 40,0 | 28,7 | 46,5 | 64,0 | 82,0 | 100,0 | 118,0 | 133,0 | 147,0 | 29,7 | 50,0 | 70,0 | 91,0 | 111,0 | 130,0 |
| 44,0 | 22,5 | 39,0 | 55,0 | 71,0 | 88,0 | 103,0 | 117,0 | 130,0 | 23,4 | 42,0 | 60,0 | 79,0 | 98,0 | 114,0 |
| 48,0 52,0 | 17,3 | 32,5 | 47,5 | 62,0 | 77,0 | 89,0 | 102,0 | 115,0 | 18,1 | 35,0 | 52,0 | 69,0 | 85,0 | 100,0 |
| 56,0 56,0 | 12,9 9,2 | 26,9 22,2 | 41,0 35,0 | 55,0 48,0 | 69,0 60,0 | 80,0 71,0 | 92,0 82,0 | 104,0 93,0 | 13,7 9,9 | 29,6 24,7 | 45,5 39,5 | 61,0 54,0 | 77,0 68,0 | 90,0 80,0 |
| 60,0 | 6,0 | 18,2 | 30,5 | 42,5 | 53,0 | 63,0 | 73,0 | 83,0 | 6,6 | 20,5 | 34,5 | 47,5 | 59,0 | 71,0 |
| 64,0 | 0,0 | 14,7 | 26,2 | 37,5 | 47,5 | 57,0 | 66,0 | 76,0 | 0,0 | 16,9 | 30,0 | 42,5 | 54,0 | 65,0 |
| 68,0 | | 11,7 | 22,5 | 33,0 | 42,0 | 51,0 | 60,0 | 69,0 | | 13,8 | 26,1 | 37,5 | 48,0 | 58,0 |
| 72,0 | | 9,0 | 19,3 | 28,2 | 36,5 | 45,0 | 54,0 | 62,0 | | 11,0 | 22,6 | 32,5 | 42,5 | 52,0 |
| 76,0 | | 6,7 | 16,5 | 24,9 | 33,0 | 41,0 | 49,0 | 57,0 | | 8,6 | 19,8 | 29,1 | 38,5 | 47,5 |
| 80,0 84,0 | | | 14,2 | 21,6 | 29,4 | 37,0 | 44,5 | 52,0 | | 6,6 | 16,9 | 25,5 | 34,5 | 43,5 |
| 88,0 | | | 12,1 10,2 | 18,7 16,8 | 25,9 23,2 | 33,5 30,5 | 40,5 37,5 | 48,0 44,0 | | | 14,5 | 22,2 19,7 | 31,0 27,9 | 39,5 |
| 00,0 | | | 10,2 | 10,0 | 23,2 | 30,5 | 37,5 | 44,0 | | | 12,5 | 19,7 | 27,9 | 36,0 |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| * * | | 40 | 45 | 47 | 47 | 47 | 47 | 47 | 0 | 40 | 40 | 47 | 47 | 47 |
| * n * | 9 | 12 | 15 | 17 | 17 | 17 | 17 | 17 | 9 | 13 | 16 | 17 | 17 | 17 |
| уу | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 15,0 | 15,0 | 15,0 | 15,0 | 15,0 | 15,0 |
| zz _ | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 | 300,0 | 350,0 | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 |
| | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | |
| 0-40 | | | | | | | | | | | | | | |
| M | 129 | 12 0 | 12,8 | 120 | 120 | 12,8 | 12 0 | 12 0 | 12,8 | 12 0 | 120 | 12,8 | 12 0 | 12,8 |
| ⋓ m/s | 12,8 | 12,8 | 12,0 | 12,8 | 12,8 | 12,0 | 12,8 | 12,8 | 12,0 | 12,8 | 12,8 | 12,0 | 12,8 | 12,0 |
| | | 07.5 | | | ור | Ą | | 1.0 x | Risk. | A | | | | \bigcap |
| | | SDB | | | | 456 | | +.∪ X | | | | | | |
| | | 90m | | | | 150 | | 14.0 | | ₩ _{77 t} | | | | |
| l | JL | 20111 | | | JL | t | | m | У | y m | l | J | l | J |



| 074619 | | | | | | | | | | | | 220 | | 22 | .ou |
|--------------|----------------|----------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---|---------------|--------|-----|-----|
| | | m | ı > < t | ı | CO | DE : | >807 | 73< | | - | | V18 | 31 2 | 230 | 0 |
| m m m | 90,0 | 90,0 | 90,0 | 90,0 | 90,0 | 90,0 | 90,0 | 90,0 | 90,0 | 90,0 | | | | | |
| 14,0 | 269,0 | 269,0 | 152,0 | 214,0 | 267,0 | 267,0 | 267,0 | 267,0 | 267,0 | 267,0 | | | | | |
| 16,0 | 266,0 | 266,0 | 130,0 | 185,0 | 241,0 | 264,0 | 265,0 | 265,0 | 265,0 | 265,0 | | | | | |
| 18,0 20,0 | 265,0 263,0 | 265,0 263,0 | 113,0 99,0 | 163,0 144,0 | 212,0 189,0 | 254,0 235,0 | 264,0 262,0 | 264,0 262,0 | 264,0 262,0 | 264,0 262,0 | | | | | |
| 22,0 | 254,0 | 254,0 | 87,0 | 128,0 | 170,0 | 212,0 | 249,0 | 253,0 | 253,0 | 253,0 | | _ | | | |
| 24,0 | 242,0 | 248,0 | 77,0 | 115,0 | 154,0 | 192,0 | 231,0 | 243,0 | 252,0 | 252,0 | | | | | |
| 26,0 | 231,0 | 241,0 | 68,0 | 104,0 | 140,0 | 176,0 | 211,0 | 233,0 | 247,0 | 247,0 | | | | | |
| 28,0 | 219,0 | 231,0 | 61,0 | 94,0 | 128,0 | 161,0 | 194,0 | 222,0 | 238,0 | 240,0 | | | | | |
| 30,0 | 206,0 | 218,0 | 54,0 | 86,0 | 117,0 | 148,0 | 180,0 | 208,0 | 225,0 | 230,0 | | | | | |
| 32,0 | 192,0 | 205,0 | 48,5 | 78,0 | 108,0 | 137,0 | 167,0 | 195,0 | 212,0 | 220,0 | | | | | |
| 34,0 | 179,0 | 193,0 | 43,5 | 71,0 | 99,0 | 127,0 | 155,0 | 181,0 | 199,0 | 211,0 | | | | | |
| 36,0 | 166,0 | 180,0 | 39,0 | 65,0 | 92,0 | 118,0 | 145,0 | 168,0 | 186,0 | 201,0 | | | | | |
| 38,0 | 156,0 | 170,0 | 35,0 | 60,0 | 85,0 | 110,0 | 136,0 | 157,0 | 175,0 | 192,0 | | | | | |
| 40,0 | 147,0 | 161,0 | 31,0 | 55,0 | 79,0 | 103,0 | 127,0 | 148,0 | 166,0 | 182,0 | | | | | |
| 44,0 | 130,0 | 144,0 | 24,7 | 46,5 | 69,0 | 91,0 | 112,0 | 131,0 | 148,0 | 164,0 | | | | | |
| 48,0 | 114,0 | 127,0 | 19,4 | 39,5 | 60,0 | 80,0 | 98,0 | 115,0 | 131,0 | 146,0 | | | | | |
| 52,0 | 103,0 | 116,0 | 14,8 | 33,5 | 52,0 | 71,0 | 88,0 | 104,0 | 120,0 | 134,0 | | | | | |
| 56,0 | 93,0 | 105,0 | 11,0 | 28,5 | 46,0 | 63,0 | 79,0 | 94,0 | 108,0 | 121,0 | | | | | |
| 60,0 64,0 | 83,0 | 94,0 | 7,6 | 24,1 | 40,5 | 55,0 | 69,0 | 83,0 | 97,0 | 110,0 | | | | | |
| 68,0 | 76,0 | 87,0 | | 20,3 | 35,5 31,0 | 50,0 | 63,0 | 76,0 | 89,0 | 101,0 | | | | | |
| 72,0 | 69,0 62,0 | 79,0 71,0 | | 16,9 14,0 | 27,2 | 44,5 39,5 | 57,0 51,0 | 69,0 62,0 | 82,0 74,0 | 93,0 85,0 | | | | | |
| 76,0 | 57,0 | 66,0 | | 11,3 | 23,8 | 35,5 | 46,5 | 57,0 | 68,0 | 78,0 | | | | | |
| 80,0 | 52,0 | 61,0 | | 8,9 | 20,7 | 31,5 | 42,0 | 53,0 | 63,0 | 71,0 | | | | | |
| 84,0 | 47,5 | 56,0 | | 6,9 | 18,0 | 28,1 | 38,0 | 48,0 | 58,0 | 63,0 | | | | | |
| 88,0 | 43,5 | 51,0 | | 5,2 | 15,9 | 25,3 | 35,0 | 43,5 | 52,0 | 52,0 | | | | | |
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| | | | | | | | | | | | | | | | |
| | 4.7 | 47 | • | 4.0 | 4.7 | 4-7 | 4-7 | 47 | 47 | 4-7 | | | | | |
| * n * | 17 | 17 | 9 | 13 | 17 | 17 | 17 | 17 | 17 | 17 | | | | | |
| уу — | 15,0 | 15,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | | 1 | | | |
| ZZ | 300,0 | 350,0 | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 | 300,0 | 350,0 | | + | | | |
| | 323,0 | | 3,0 | - 5,0 | 23,0 | - 5,0 | | 23,0 | | , . | | 1 | | | |
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| - 1- | | | | | | | | | | | | + | | | |
| -} • | | | | | | | | | | | | | | | |
| m/s | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | | | | | |
| | | | | | | | | | | | - | | | | |
| | | 055 | | | 1 | Ą | | 1.0 x | 100 | | | $\overline{}$ | \cap | | 7 |
| | | SDB | | | | | | T.U A | | | 1 | | | | |
| | | 90m | | | | 150 | | 14.0 📘 | | ₩ | | | | | |
| | | | | | | t | | m | У | y m | l | | | | J |
| | | | | | | | | | | | • | | _ | | _ |



| 0/4618 | , | | | | | | | | | | | 220 | 4 | 22.50 |
|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | | m | ı > < t | | CO | DE : | >807 | 74< | | | | V18 | 1 24 | 100 |
| m m m | 96,0 | 96,0 | 96,0 | 96,0 | 96,0 | 96,0 | 96,0 | 96,0 | 96,0 | 96,0 | 96,0 | 96,0 | 96,0 | 96,0 |
| 14,0 16,0 | 140,0 120,0 | 185,0 160,0 | 229,0 200,0 | 239,0 239,0 | 239,0 239,0 | 239,0 239,0 | 239,0 239,0 | 239,0 239,0 | 142,0 122,0 | 193,0 168,0 | 237,0 213,0 | 237,0 237,0 | 237,0 237,0 | 237,0 237,0 |
| 18,0 | 104,0 | 140,0 | 176,0 | 212,0 | 232,0 | 236,0 | 236,0 | 236,0 | 106,0 | 147,0 | 188,0 | 228,0 | 234,0 | 234,0 |
| 20,0 | 91,0 | 124,0 | 157,0 | 189,0 | 222,0 | 233,0 | 235,0 | 235,0 | 93,0 | 130,0 | 168,0 | 205,0 | 230,0 | 234,0 |
| 22,0 | 80,0 | 110,0 | 140,0 | 170,0 | 201,0 | 229,0 | 232,0 | 232,0 | 81,0 | 116,0 | 150,0 | 185,0 | 219,0 | 231,0 |
| 24,0 26,0 | 70,0 62,0 | 98,0 88,0 | 126,0 114,0 | 154,0 140,0 | 182,0 166,0 | 210,0 193,0 | 221,0 209,0 | 224,0 216,0 | 72,0 64,0 | 104,0 93,0 | 136,0 123,0 | 168,0 153,0 | 200,0 182,0 | 219,0 207,0 |
| 28,0 | 55,0 | 80,0 | 104,0 | 128,0 | 153,0 | 177,0 | 198,0 | 207,0 | 57,0 | 84,0 | 112,0 | 140,0 | 168,0 | 195,0 |
| 30,0 | 49,0 | 72,0 | 95,0 | 118,0 | 141,0 | 164,0 | 186,0 | 197,0 | 50,0 | 76,0 | 103,0 | 129,0 | 155,0 | 181,0 |
| 32,0 | 43,5 | 65,0 | 87,0 | 108,0 | 130,0 | 152,0 | 173,0 | 186,0 | 45,0 | 69,0 | 94,0 | 119,0 | 143,0 | 168,0 |
| 34,0 | 39,0 | 59,0 | 80,0 | 100,0 | 121,0 | 141,0 | 161,0 | 175,0 | 40,0 | 63,0 | 86,0 | 110,0 | 133,0 | 156,0 |
| 36,0 38,0 | 34,5 30,5 | 54,0 49,0 | 73,0 67,0 | 93,0 86,0 | 112,0 104,0 | 131,0 123,0 | 151,0 140,0 | 165,0 154,0 | 35,5 31,5 | 58,0 53,0 | 80,0 74,0 | 102,0 95,0 | 124,0 116,0 | 146,0 137,0 |
| 40,0 | 27,0 | 44,5 | 62,0 | 80,0 | 97,0 | 115,0 | 130,0 | 144,0 | 28,0 | 48,0 | 68,0 | 88,0 | 108,0 | 127,0 |
| 44,0 | 20,9 | 37,0 | 53,0 | 69,0 | 85,0 | 101,0 | 116,0 | 129,0 | 21,8 | 40,0 | 59,0 | 77,0 | 95,0 | 113,0 |
| 48,0 | 15,8 | 30,5 | 45,5 | 60,0 | 75,0 | 89,0 | 102,0 | 114,0 | 16,6 | 33,5 | 50,0 | 67,0 | 84,0 | 99,0 |
| 52,0 | 11,4 | 25,2 | 39,0 | 53,0 | 67,0 | 78,0 | 90,0 | 102,0 | 12,2 | 27,9 | 43,5 | 59,0 | 74,0 | 88,0 |
| 56,0 60,0 | 7,7 | 20,6 16,6 | 33,5 28,7 | 46,5 | 59,0 52,0 | 70,0 | 81,0 72,0 | 92,0 82,0 | 8,4 5,2 | 23,1 18,9 | 38,0 | 52,0 | 67,0 59,0 | 79,0 71,0 |
| 64,0 | | 13,1 | 24,5 | 40,5 36,0 | 45,5 | 62,0 55,0 | 64,0 | 74,0 | 5,2 | 15,3 | 32,5 28,3 | 46,5 41,0 | 52,0 | 63,0 |
| 68,0 | | 10,0 | 20,8 | 31,5 | 41,0 | 49,5 | 59,0 | 68,0 | | 12,1 | 24,4 | 36,5 | 46,5 | 57,0 |
| 72,0 | | 7,3 | 17,5 | 27,4 | 36,0 | 44,5 | 53,0 | 61,0 | | 9,3 | 20,9 | 32,0 | 41,5 | 52,0 |
| 76,0 | | 5,0 | 14,7 | 23,0 | 31,5 | 39,5 | 47,0 | 55,0 | | 6,9 | 17,9 | 27,3 | 36,5 | 46,0 |
| 80,0 84,0 | | | 12,2 10,0 | 20,2 17,7 | 27,8 24,5 | 35,5 32,0 | 43,0 39,0 | 51,0 46,5 | | | 15,3 | 24,0 21,0 | 33,0 29,4 | 42,0 38,0 |
| 88,0 | | | 8,1 | 15,2 | 24,3 | 28,3 | 35,5 | 40,5 | | | 13,0 10,9 | 18,0 | 25,9 | 34,0 |
| 92,0 | | | 6,6 | 13,3 | 18,8 | 25,5 | 32,5 | 39,0 | | | 9,0 | 16,2 | 23,2 | 31,0 |
| 96,0 | | | 5,4 | 12,1 | 17,5 | 23,5 | 30,0 | 36,5 | | | 7,5 | 14,9 | 21,3 | 28,8 |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| * n * | 9 | 12 | 14 | 15 | 15 | 15 | 15 | 15 | 9 | 12 | 15 | 15 | 15 | 15 |
| уу — | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 15,0 | 15,0 | 15,0 | 15,0 | 15,0 | 15,0 |
| ZZ — | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 | 300,0 | 350,0 | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 |
| | | | | | | | | | | | | | | |
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| 0-40 | | | | | | | | | | | | | | |
| m/s | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 |
| W 111/3 | .2,0 | . 2,0 | . 2,0 | . 2,0 | . 2,0 | . 2,0 | . 2,0 | . 2,0 | .2,0 | .2,0 | . 2,0 | . 2,0 | . 2,0 | .2,0 |
| | | CDD | | | 1 | <u>~</u> | 1, | 4.0 x | No. | | | | \bigcap | |
| | | SDB | | | IIF | 150 | | 14.0 | | | | | | |
| | | 96m | | | | 100 | | 14.0 | ■ • | zz t | | | | |
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| 074619 | | | | | | | | | | | | 220 | | 22. | .00 |
|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---|---------------|-----------|---------|-----|
| | | m | > < t | - | CO | DE : | >807 | 74< | | | | V18 | 1 2 | 240 | 0 |
| ■ M m | 96,0 | 96,0 | 96,0 | 96,0 | 96,0 | 96,0 | 96,0 | 96,0 | 96,0 | 96,0 | | | | | |
| 14,0 | 237,0 | 237,0 | 146,0 | 207,0 | 235,0 | 235,0 | 235,0 | 235,0 | 235,0 | 235,0 | | | | | |
| 16,0 18,0 | 237,0 234,0 | 237,0 234,0 | 126,0 109,0 | 180,0 158,0 | 234,0 207,0 | 234,0 230,0 | 234,0 233,0 | 234,0 233,0 | 234,0 233,0 | 234,0 233,0 | | | | | |
| 20,0 | 234,0 | 234,0 | 95,0 | 140,0 | 184,0 | 226,0 | 232,0 | 232,0 | 232,0 | 232,0 | | | | | |
| 22,0 | 232,0 | 232,0 | 84,0 | 125,0 | 166,0 | 207,0 | 229,0 | 230,0 | 230,0 | 230,0 | | | | | |
| 24,0 | 225,0 | 225,0 | 74,0 | 112,0 | 150,0 | 188,0 | 217,0 | 224,0 | 227,0 | 227,0 | | | | | |
| 26,0 | 218,0 | 220,0 | 66,0 | 101,0 | 136,0 | 171,0 | 206,0 | 219,0 | 223,0 | 223,0 | | | | | |
| 28,0 | 210,0 | 214,0 | 59,0 | 92,0 | 124,0 | 157,0 | 190,0 | 213,0 | 219,0 | 219,0 | | | | | |
| 30,0 32,0 | 200,0 189,0 | 205,0 196,0 | 52,0 46,5 | 83,0 76,0 | 114,0 105,0 | 145,0 | 176,0 | 203,0 191,0 | 211,0 201,0 | 213,0 | | | | | |
| 34,0 | 177,0 | 186,0 | 40,5 | 69,0 | 97,0 | 134,0 124,0 | 163,0 152,0 | 179,0 | 192,0 | 205,0 198,0 | | + | | | |
| 36,0 | 166,0 | 177,0 | 37,0 | 63,0 | 90,0 | 116,0 | 142,0 | 168,0 | 182,0 | 190,0 | | | | | |
| 38,0 | 154,0 | 167,0 | 33,0 | 58,0 | 83,0 | 108,0 | 133,0 | 156,0 | 172,0 | 183,0 | | | | | |
| 40,0 | 144,0 | 159,0 | 29,5 | 53,0 | 77,0 | 101,0 | 125,0 | 146,0 | 163,0 | 175,0 | | | | | |
| 44,0 | 129,0 | 143,0 | 23,2 | 45,0 | 67,0 | 88,0 | 110,0 | 131,0 | 147,0 | 160,0 | | | | | |
| 48,0 | 114,0 | 127,0 | 17,9 | 38,0 | 58,0 | 78,0 | 98,0 | 115,0 | 131,0 | 145,0 | | 1 | | \perp | |
| 52,0 | 101,0 | 114,0 | 13,3 | 32,0 | 51,0 | 69,0 | 86,0 | 102,0 | 118,0 | 131,0 | | | | | |
| 56,0 60,0 | 92,0 | 104,0 | 9,5 | 26,9 | 44,5 | 62,0 | 78,0 | 93,0 | 107,0 | 120,0 | | - | | | |
| 64,0 | 82,0 74,0 | 94,0 84,0 | 6,2 | 22,5 18,6 | 39,0 34,0 | 55,0 48,5 | 69,0 61,0 | 83,0 74,0 | 97,0 87,0 | 109,0 99,0 | | | | | |
| 68,0 | 68,0 | 78,0 | | 15,3 | 29,8 | 43,5 | 56,0 | 68,0 | 80,0 | 92,0 | | | | | |
| 72,0 | 61,0 | 71,0 | | 12,3 | 26,1 | 38,5 | 50,0 | 62,0 | 73,0 | 85,0 | | | | | |
| 76,0 | 55,0 | 64,0 | | 9,7 | 22,1 | 33,5 | 45,0 | 56,0 | 67,0 | 77,0 | | | | | |
| 80,0 | 51,0 | 59,0 | | 7,4 | 19,4 | 29,9 | 40,5 | 51,0 | 61,0 | 72,0 | | | | | |
| 84,0 | 46,5 | 55,0 | | 5,4 | 16,8 | 26,6 | 37,0 | 47,0 | 57,0 | 66,0 | | | | | |
| 88,0 | 42,0 | 50,0 | | | 14,4 | 23,2 | 33,0 | 42,5 | 52,0 | 60,0 | | | | | |
| 92,0 96,0 | 38,5 | 46,5 | | | 12,3 | 20,5 | 29,9 | 39,0 | 48,5 | 51,0 | | | | | |
| 90,0 | 35,0 | 38,0 | | | 10,6 | 19,0 | 27,9 | 32,0 | 35,5 | 35,5 | | + | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| * n * | 15 | 15 | 9 | 13 | 15 | 15 | 15 | 15 | 15 | 15 | | | | | |
| уу — | 15,0 | 15,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | | + | | _ | |
| zz | 300,0 | 350,0 | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 | 300,0 | 350,0 | | + | | + | |
| | 1 - | 1 = | -,- | 1 - | 1 - | | 1 - | 1 = | 1 = | 1 - | | 1 | | | |
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| - 1e | | | | | | | | | | | | | | - | |
| 0-∦0 | | | | | | | | | | | | | | | |
| ⋓ m/s | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | | | | | |
| | | | | | | | | | | | | <u></u> | | | |
| $\overline{}$ | | | | | 1 | А | | 10 | Ra. | AD. | | $\overline{}$ | \bigcap | | 7 |
| | | SDB | | | | | 14 | 1.0 x | | | 1 | | | | |
| | | 96m | | | | 150 | | 14.0 | | W | 1 | | | | |
| | | 55111 | | | | t | | m _ | У. | y m | l | | l | | |



| 074619 | , | | | | | | | | | | | 220 | | 22.50 |
|--------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | | m | 1 > < t | | CO | DE : | >807 | 75< | | | | V18 | 1 25 | 500 |
| ■ m | 102,0 | 102,0 | 102,0 | 102,0 | 102,0 | 102,0 | 102,0 | 102,0 | 102,0 | 102,0 | 102,0 | 102,0 | 102,0 | 102,0 |
| 14,0 | 134,0 | 178,0 | 210,0 | 210,0 | 210,0 | 210,0 | 210,0 | 210,0 | 137,0 | 187,0 | 207,0 | 207,0 | 207,0 | 207,0 |
| 16,0 18,0 | 115,0 100,0 | 154,0 135,0 | 193,0 171,0 | 209,0 205,0 | 209,0 206,0 | 209,0 | 209,0 | 209,0 206,0 | 118,0 102,0 | 162,0 142,0 | 207,0 183,0 | 207,0 | 207,0 206,0 | 207,0 |
| 20,0 | 87,0 | 119,0 | 152,0 | 184,0 | 203,0 | 206,0 | 206,0 | 206,0 | 89,0 | 126,0 | 163,0 | 198,0 | 205,0 | 205,0 |
| 22,0 | 76,0 | 106,0 | 136,0 | 166,0 | 195,0 | 205,0 | 205,0 | 205,0 | 78,0 | 112,0 | 146,0 | 180,0 | 204,0 | 204,0 |
| 24,0 | 67,0 | 95,0 | 123,0 | 150,0 | 178,0 | 198,0 | 200,0 | 200,0 | 69,0 | 100,0 | 132,0 | 163,0 | 195,0 | 199,0 |
| 26,0 | 60,0 | 85,0 | 111,0 | 137,0 | 162,0 | 187,0 | 193,0 | 194,0 | 61,0 | 90,0 | 120,0 | 149,0 | 178,0 | 192,0 |
| 28,0 | 53,0 | 77,0 | 101,0 | 125,0 | 149,0 | 173,0 | 185,0 | 189,0 | 54,0 | 81,0 | 109,0 | 136,0 | 164,0 | 185,0 |
| 30,0 32,0 | 46,5 41,5 | 69,0 63,0 | 92,0 84,0 | 114,0 105,0 | 137,0 | 160,0 148,0 | 178,0 169,0 | 183,0 175,0 | 48,0 | 74,0 67,0 | 99,0 91,0 | 125,0 115,0 | 151,0 140,0 | 177,0 164,0 |
| 34,0 | 36,5 | 57,0 | 77,0 | 97,0 | 127,0 117,0 | 138,0 | 158,0 | 166,0 | 42,5 38,0 | 61,0 | 84,0 | 107,0 | 130,0 | 153,0 |
| 36,0 | 32,5 | 52,0 | 71,0 | 90,0 | 109,0 | 128,0 | 147,0 | 158,0 | 33,5 | 55,0 | 77,0 | 99,0 | 121,0 | 143,0 |
| 38,0 | 28,6 | 47,0 | 65,0 | 83,0 | 102,0 | 120,0 | 138,0 | 150,0 | 29,6 | 50,0 | 71,0 | 92,0 | 113,0 | 134,0 |
| 40,0 | 25,1 | 42,5 | 60,0 | 77,0 | 95,0 | 112,0 | 129,0 | 141,0 | 26,1 | 46,0 | 66,0 | 86,0 | 105,0 | 125,0 |
| 44,0 | 19,1 | 35,0 | 51,0 | 67,0 | 83,0 | 99,0 | 114,0 | 127,0 | 20,0 | 38,0 | 56,0 | 74,0 | 93,0 | 111,0 |
| 48,0 | 14,0 | 28,7 | 43,5 | 58,0 | 73,0 | 88,0 | 101,0 | 113,0 | 14,8 | 31,5 | 48,5 | 65,0 | 82,0 | 98,0 |
| 52,0 56,0 | 9,7 | 23,4 | 37,0 | 51,0 | 64,0 | 77,0 | 88,0 | 100,0 | 10,4 | 26,0 | 41,5 | 57,0 50.0 | 73,0 | 86,0 |
| 60,0 | 6,0 | 18,7 14,7 | 31,5 26,7 | 44,5 38,5 | 57,0 51,0 | 68,0 61,0 | 79,0 71,0 | 90,0 81,0 | 6,7 | 21,2 17,1 | 36,0 30,5 | 50,0 44,5 | 65,0 58,0 | 77,0 69,0 |
| 64,0 | | 11,2 | 22,5 | 34,0 | 44,5 | 54,0 | 63,0 | 73,0 | | 13,4 | 26,3 | 39,0 | 51,0 | 62,0 |
| 68,0 | | 8,2 | 18,8 | 29,5 | 38,5 | 47,5 | 56,0 | 65,0 | | 10,2 | 22,4 | 34,5 | 44,5 | 55,0 |
| 72,0 | | 5,4 | 15,6 | 25,7 | 34,5 | 43,0 | 51,0 | 60,0 | | 7,4 | 18,9 | 30,0 | 40,0 | 50,0 |
| 76,0 | | | 12,7 | 22,0 | 30,0 | 38,5 | 46,5 | 54,0 | | | 15,9 | 26,0 | 35,5 | 45,0 |
| 80,0 | | | 10,1 | 18,3 | 25,8 | 33,5 | 41,0 | 49,0 | | | 13,2 | 21,9 | 31,0 | 40,0 |
| 84,0 88,0 | | | 7,8 | 15,7 | 22,6 | 29,9 | 37,0 | 44,5 | | | 10,8 | 19,0 | 27,4 | 36,0 |
| 92,0 | | | 5,8 | 13,6 11,6 | 20,0 17,3 | 26,7 23,4 | 34,0 30,5 | 41,0 37,0 | | | 8,6 6,8 | 16,7 14,5 | 24,2 21,0 | 32,5 29,0 |
| 96,0 | | | | 9,8 | 15,2 | 20,7 | 27,2 | 33,5 | | | 5,2 | 12,5 | 18,6 | 26,0 |
| 100,0 | | | | 8,4 | 13,6 | 18,7 | 24,7 | 31,0 | | | -,- | 11,1 | 17,0 | 23,5 |
| | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| * n * | 8 | 11 | 13 | 13 | 13 | 13 | 13 | 13 | 8 | 12 | 13 | 13 | 13 | 13 |
| | | | | | | | | | | | | | | |
| уу | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 15,0 | 15,0 | 15,0 | 15,0 | 15,0 | 15,0 |
| ZZ | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 | 300,0 | 350,0 | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 |
| | | | | | | | | | | | | | | |
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| 0-40 | | | | | | | | | | | | | | |
| ` ⋒ | 400 | 46.0 | 46.0 | 46.5 | 46.0 | 40.0 | 40.0 | 40.0 | 46.6 | 40.0 | 40.0 | 46.0 | 40.0 | 40.0 |
| ⋓ m/s | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 |
| | | | | | | | | | | | | | | |
| ſ | | CDD | | | | Ā | 1. | 4.0 x | P | | | 1 | ſ |] |
| | | SDB | | | | 150 | | 140 | | | | | | |
| | | 102m | | | | 150 | | 14.0 👗 | | zz t | | | | |
| l | JL | | | | JL | t | JL | m | у | y m | l | J | l | J |



| 074619 | | | | | | | | | | | 220 | | | 2.50 |
|--------------|----------------|----------------|--------------|---------------|----------------|----------------|-----------------------------|----------------|----------------|----------------|-----|-----------|----|------|
| | | m | ı > < t | | CO | DE : | >807 | 75< | | - | V18 | 31 : | 25 | 00 |
| ■ m | 102,0 | 102,0 | 102,0 | 102,0 | 102,0 | 102,0 | 102,0 | 102,0 | 102,0 | 102,0 | | | | |
| 14,0 | 207,0 | 207,0 | 141,0 | 200,0 | 205,0 | 205,0 | 205,0 | 205,0 | 205,0 | 205,0 | | | | |
| 16,0 | 207,0 | 207,0 | 121,0 | 174,0 | 205,0 | 205,0 | 205,0 | 205,0 | 205,0 | 205,0 | | | | |
| 18,0 | 206,0 | 206,0 | 105,0 | 153,0 | 201,0 | 203,0 | 203,0 | 203,0 | 203,0 | 203,0 | | | | |
| 20,0 | 205,0 | 205,0 204,0 | 92,0 | 135,0 | 179,0 | 203,0 | 203,0 | 203,0 | 203,0 | 203,0 | | | | |
| 22,0 | 204,0 199,0 | 199,0 | 81,0 71,0 | 121,0 | 161,0 | 201,0 | 201,0 | 201,0 200,0 | 201,0 200,0 | 201,0 200,0 | | | | |
| 24,0 26,0 | 199,0 | 199,0 | 63,0 | 109,0 98,0 | 146,0 133,0 | 183,0 167,0 | 197,0 190,0 | 198,0 | 198,0 | 198,0 | | | | |
| 28,0 | 193,0 | 193,0 | 56,0 | 89,0 | 121,0 | 154,0 | 183,0 | 196,0 | 196,0 | 196,0 | | | | |
| 30,0 | 189,0 | 189,0 | 50,0 | 80,0 | 111,0 | 141,0 | 172,0 | 194,0 | 194,0 | 194,0 | | | | |
| 32,0 | 180,0 | 182,0 | 44,5 | 73,0 | 102,0 | 131,0 | 160,0 | 185,0 | 187,0 | 187,0 | | | | |
| 34,0 | 171,0 | 175,0 | 39,5 | 67,0 | 94,0 | 121,0 | 149,0 | 175,0 | 180,0 | 182,0 | | | | |
| 36,0 | 161,0 | 168,0 | 35,0 | 61,0 | 87,0 | 113,0 | 139,0 | 164,0 | 173,0 | 176,0 | | | | |
| 38,0 | 151,0 | 161,0 | 31,0 | 56,0 | 80,0 | 105,0 | 130,0 | 154,0 | 166,0 | 170,0 | | | | |
| 40,0 | 142,0 | 154,0 | 27,6 | 51,0 | 75,0 | 98,0 | 122,0 | 144,0 | 159,0 | 164,0 | | | | |
| 44,0 | 126,0 | 140,0 | 21,3 | 43,0 | 64,0 | 86,0 | 107,0 | 128,0 | 145,0 | 152,0 | | | | |
| 48,0 | 113,0 | 126,0 | 16,0 | 36,0 | 56,0 | 76,0 | 96,0 | 114,0 | 130,0 | 140,0 | | | | |
| 52,0 | 99,0 | 112,0 | 11,6 | 30,0 | 48,5 | 67,0 | 84,0 | 100,0 | 116,0 | 128,0 | | | | |
| 56,0 | 90,0 | 102,0 | 7,7 | 25,0 | 42,0 | 59,0 | 75,0 | 90,0 | 105,0 | 118,0 | | | | |
| 60,0 | 81,0 | 92,0 | | 20,6 | 37,0 | 53,0 | 68,0 | 82,0 | 96,0 | 108,0 | | | | |
| 64,0 68,0 | 73,0 | 83,0 | | 16,7 | 32,0 | 47,0 | 60,0 | 73,0 | 86,0 | 99,0 | | | | |
| 72,0 | 65,0 60,0 | 75,0 69,0 | | 13,3 | 27,8 24,0 | 41,0 | 53,0 48,5 | 66,0 60,0 | 78,0 72,0 | 90,0 83,0 | | | | |
| 76,0 | 54,0 | 63,0 | | 10,4 7,7 | 20,7 | 37,0 32,5 | 43,5 | 55,0 | 66,0 | 77,0 | | | | |
| 80,0 | 48,5 | 57,0 | | 5,4 | 17,7 | 28,0 | 38,5 | 49,0 | 60,0 | 70,0 | | | | |
| 84,0 | 44,5 | 53,0 | | 0,4 | 15,2 | 24,6 | 35,0 | 45,0 | 55,0 | 64,0 | | | | |
| 88,0 | 40,5 | 48,5 | | | 12,8 | 21,7 | 31,5 | 41,0 | 51,0 | 59,0 | | | | |
| 92,0 | 36,5 | 44,5 | | | 10,6 | 18,8 | 27,9 | 37,0 | 46,5 | 54,0 | | | | |
| 96,0 | 33,5 | 41,0 | | | 8,6 | 16,6 | 24,9 | 34,0 | 42,5 | 48,0 | | | | |
| 100,0 | 30,5 | 36,0 | | | 7,0 | 15,0 | 22,6 | 29,8 | 36,5 | 38,0 | | | | |
| | | | | | | | | | | | | | | |
| * n * | 13 | 13 | 9 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | | | | |
| | '0 | | - | | | | | | 10 | 10 | | | + | |
| уу | 15,0 | 15,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | | | | |
| zz | 300,0 | 350,0 | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 | 300,0 | 350,0 | | | | |
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| - 1- | | | | | | | | | | | | - | - | |
| o -∦o | | | | | | | | | | | | | | |
| ⋓ m/s | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | | | | |
| | | | | | | | | | | | | | | |
| | | SDB | | | 7[2 | <u>~</u> | 14 | 4.0 x | No. | | | \bigcap | | |
| | | 102m | | | | 150 t | $\ \mathbf{I}^{\mathbf{T}}$ | 14.0 T m | ≜ V | zz t y m | | | | |



| 0/4619 | 1 A A A | | | | | | | | | | | 220 | | 22.50 |
|----------------|--------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------|----------------|----------------|----------------|----------------|----------------|
| | | m | ı > < t | | CO | DE : | >807 | 76< | | | | V18 | 1 26 | 600 |
| m m | 108,0 | 108,0 | 108,0 | 108,0 | 108,0 | 108,0 | 108,0 | 108,0 | 108,0 | 108,0 | 108,0 | 108,0 | 108,0 | 108,0 |
| 16,0 | 111,0 | 150,0 | 185,0 | 185,0 | 185,0 | 185,0 | 185,0 | 185,0 | 114,0 | 157,0 | 183,0 | 183,0 | 183,0 | 183,0 |
| 18,0 20,0 | 97,0 84,0 | 131,0 116,0 | 166,0 148,0 | 184,0 178,0 | 184,0 183,0 | 184,0 183,0 | 184,0 183,0 | 184,0 183,0 | 99,0 86,0 | 138,0 122,0 | 178,0 158,0 | 182,0 181,0 | 182,0 182,0 | 182,0 182,0 |
| 22,0 | 74,0 | 103,0 | 133,0 | 162,0 | 182,0 | 182,0 | 182,0 | 182,0 | 76,0 | 109,0 | 142,0 | 176,0 | 181,0 | 181,0 |
| 24,0 | 65,0 | 92,0 | 119,0 | 147,0 | 174,0 | 181,0 | 181,0 | 181,0 | 67,0 | 98,0 | 129,0 | 159,0 | 181,0 | 181,0 |
| 26,0 | 58,0 | 83,0 | 108,0 | 133,0 | 159,0 | 173,0 | 177,0 | 177,0 | 59,0 | 88,0 | 117,0 | 145,0 | 172,0 | 176,0 |
| 28,0 30,0 | 51,0 45,0 | 75,0 67,0 | 98,0 90,0 | 122,0 112,0 | 146,0 134,0 | 166,0 157,0 | 172,0 168,0 | 172,0 168,0 | 52,0 46,5 | 79,0 72,0 | 106,0 97,0 | 133,0 123,0 | 160,0 148,0 | 172,0 168,0 |
| 32,0 | 40,0 | 61,0 | 82,0 | 103,0 | 124,0 | 145,0 | 163,0 | 163,0 | 41,0 | 65,0 | 89,0 | 113,0 | 137,0 | 161,0 |
| 34,0 | 35,0 | 55,0 | 75,0 | 95,0 | 115,0 | 135,0 | 154,0 | 157,0 | 36,5 | 59,0 | 82,0 | 105,0 | 127,0 | 150,0 |
| 36,0 | 31,0 | 50,0 | 69,0 | 88,0 | 107,0 | 126,0 | 145,0 | 150,0 | 32,0 | 54,0 | 75,0 | 97,0 | 118,0 | 140,0 |
| 38,0 40,0 | 27,3 | 45,5 | 63,0 | 81,0 | 99,0 | 117,0 110,0 | 136,0 | 144,0 | 28,3 | 49,0 | 69,0 | 90,0 | 111,0 | 131,0 |
| 44,0 | 23,9 17,9 | 41,0 33,5 | 58,0 49,5 | 76,0 65,0 | 93,0 81,0 | 97,0 | 127,0 111,0 | 138,0 125,0 | 24,8 18,8 | 44,5 37,0 | 64,0 55,0 | 84,0 73,0 | 103,0 91,0 | 123,0 109,0 |
| 48,0 | 12,9 | 27,5 | 42,0 | 57,0 | 71,0 | 86,0 | 100,0 | 112,0 | 13,7 | 30,5 | 47,0 | 64,0 | 80,0 | 97,0 |
| 52,0 | 8,6 | 22,2 | 35,5 | 49,5 | 63,0 | 76,0 | 89,0 | 100,0 | 9,4 | 24,8 | 40,5 | 56,0 | 71,0 | 87,0 |
| 56,0 | | 17,6 | 30,5 | 43,0 | 56,0 | 66,0 | 77,0 | 88,0 | 5,6 | 20,1 | 34,5 | 49,0 | 63,0 | 75,0 |
| 60,0 64,0 | | 13,6 | 25,5 | 37,5 | 49,5 43,5 | 60,0 | 70,0 | 80,0 | | 15,9 | 29,5 | 43,0 | 57,0 | 68,0 |
| 68,0 | | 10,1 7,1 | 21,3 17,7 | 32,5 28,2 | 43,5 38,0 | 54,0 47,0 | 63,0 56,0 | 73,0 65,0 | | 12,3 9,1 | 25,1 21,2 | 38,0 33,5 | 50,0 44,5 | 61,0 55,0 |
| 72,0 | | -,. | 14,4 | 24,4 | 33,0 | 41,5 | 50,0 | 59,0 | | 6,3 | 17,7 | 28,9 | 39,0 | 48,5 |
| 76,0 | | | 11,5 | 21,0 | 29,1 | 37,5 | 45,5 | 54,0 | | | 14,7 | 25,4 | 34,5 | 44,0 |
| 80,0 | | | 8,9 | 18,0 | 25,2 | 33,0 | 41,0 | 48,5 | | | 11,9 | 21,8 | 30,5 | 39,5 |
| 84,0 88,0 | | | 6,6 | 15,2 12,8 | 21,3 18,4 | 28,9 25,5 | 36,5 32,5 | 43,5 39,5 | | | 9,5 7,3 | 18,3 15,6 | 26,4 23,1 | 35,0 31,0 |
| 92,0 | | | | 10,7 | 16,3 | 22,7 | 29,3 | 36,0 | | | 5,3 | 13,6 | 20,5 | 28,0 |
| 96,0 | | | | 8,7 | 14,2 | 19,9 | 26,1 | 32,5 | | | -,- | 11,6 | 17,9 | 24,9 |
| 100,0 | | | | 7,1 | 12,2 | 17,3 | 23,1 | 29,4 | | | | 9,7 | 15,6 | 21,9 |
| 104,0 108,0 | | | | 5,7 | 10,6 | 15,6 | 20,5 | 26,7 | | | | 8,2 | 13,9 | 19,6 |
| 100,0 | | | | | 9,6 | 14,4 | 19,2 | 24,7 | | | | 7,3 | 12,8 | 18,2 |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| * n * | 7 | 9 | 12 | 12 | 12 | 12 | 12 | 12 | 7 | 10 | 11 | 11 | 11 | 11 |
| | | - | | | | | | | • | | | | | |
| уу | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 15,0 | 15,0 | 15,0 | 15,0 | 15,0 | 15,0 |
| ZZ | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 | 300,0 | 350,0 | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 |
| | | | | | | | | | | | | | | |
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| o -∦o | | | | | | | | | | | | | | |
| ■ m/s | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 |
| | | | | | | | | | | | | | | |
| | | 055 | | | 1 | Д. | 1 | 4.0 x | Fig. | | | | | |
| | | SDB | | | | 450 | | +.∪ X | | | | | | |
| | | 108m | | | | 150 | | 14.0 📘 | | zz t | | | | |
| l | JL | | | | JL | t | JL | m | У. | y m | L | J | l | J |



| 074619 | | | | | | | | | | | | 220 | | | 2.50 |
|--------------|----------------|----------------|--------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---|----------|----|-------------------------|------|
| | | m | ı > < t | | CO | DE : | >807 | 76< | | | | V18 | 31 | 260 | 00 |
| ₽ m | 108,0 | 108,0 | 108,0 | 108,0 | 108,0 | 108,0 | 108,0 | 108,0 | 108,0 | 108,0 | | | | | |
| 16,0 | 183,0 | 183,0 | 117,0 | 169,0 | 181,0 | 181,0 | 181,0 | 181,0 | 181,0 | 181,0 | | | | | |
| 18,0 | 182,0 | 182,0 | 102,0 | 148,0 | 181,0 | 181,0 | 181,0 | 181,0 | 181,0 | 181,0 | | | | | |
| 20,0 | 182,0 | 182,0 | 89,0 | 132,0 | 175,0 | 180,0 | 180,0 | 180,0 | 180,0 | 180,0 | | | | | |
| 22,0 24,0 | 181,0 181,0 | 181,0 181,0 | 78,0 69,0 | 118,0 106,0 | 157,0 142,0 | 180,0 179,0 | 180,0 179,0 | 180,0 179,0 | 180,0 179,0 | 180,0 179,0 | | - | | _ | |
| 26,0 | 176,0 | 176,0 | 61,0 | 95,0 | 129,0 | 164,0 | 179,0 | 179,0 | 179,0 | 179,0 | | | | | |
| 28,0 | 175,0 | 175,0 | 54,0 | 86,0 | 118,0 | 150,0 | 171,0 | 176,0 | 176,0 | 176,0 | | | | _ | |
| 30,0 | 172,0 | 172,0 | 48,0 | 78,0 | 108,0 | 139,0 | 167,0 | 175,0 | 175,0 | 175,0 | | | | | |
| 32,0 | 169,0 | 169,0 | 43,0 | 71,0 | 100,0 | 128,0 | 157,0 | 174,0 | 174,0 | 174,0 | | | | | |
| 34,0 | 161,0 | 164,0 | 38,0 | 65,0 | 92,0 | 119,0 | 146,0 | 165,0 | 168,0 | 168,0 | | | | | |
| 36,0 | 154,0 | 159,0 | 33,5 | 59,0 | 85,0 | 110,0 | 136,0 | 157,0 | 163,0 | 163,0 | | | | | |
| 38,0 | 146,0 | 153,0 | 29,8 | 54,0 | 79,0 | 103,0 | 127,0 | 149,0 | 158,0 | 158,0 | | | | | |
| 40,0 | 139,0 | 148,0 | 26,3 | 49,5 | 73,0 | 96,0 | 119,0 | 141,0 | 152,0 | 153,0 | | | | | |
| 44,0 | 124,0 | 138,0 | 20,1 | 41,5 | 63,0 | 84,0 | 105,0 | 125,0 | 142,0 | 144,0 | | | | | |
| 48,0 | 112,0 | 125,0 | 14,9 | 34,5 | 54,0 | 74,0 | 94,0 | 113,0 | 129,0 | 134,0 | | | | | |
| 52,0 | 100,0 | 112,0 | 10,5 | 28,8 | 47,0 | 65,0 | 84,0 | 101,0 | 116,0 | 124,0 | | | | | |
| 56,0 | 87,0 | 100,0 | 6,7 | 23,8 | 41,0 | 58,0 | 74,0 | 88,0 | 103,0 | 115,0 | | | | | |
| 60,0 64,0 | 80,0 | 91,0 | | 19,4 | 35,5 | 52,0 | 67,0 | 81,0 | 94,0 | 106,0 | | | | $-\!\!\!\!+\!\!\!\!\!-$ | |
| 68,0 | 72,0 65,0 | 83,0 75,0 | | 15,6 | 30,5 26,5 | 46,0 41,0 | 60,0 53,0 | 73,0 65,0 | 86,0 78,0 | 98,0 89,0 | | | | | |
| 72,0 | 58,0 | 68,0 | | 12,2 9,2 | 20,5 | 35,5 | 47,5 | 59,0 | 70,0 | 82,0 | | | | + | |
| 76,0 | 53,0 | 62,0 | | 6,6 | 19,5 | 31,5 | 43,0 | 54,0 | 65,0 | 76,0 | | | | | |
| 80,0 | 48,5 | 57,0 | | 0,0 | 16,5 | 27,5 | 38,5 | 49,0 | 59,0 | 70,0 | | | | _ | |
| 84,0 | 43,5 | 52,0 | | | 13,9 | 23,5 | 34,0 | 44,0 | 54,0 | 64,0 | | | | | |
| 88,0 | 39,5 | 47,5 | | | 11,5 | 20,4 | 30,0 | 40,0 | 49,5 | 59,0 | | | | | |
| 92,0 | 36,0 | 43,5 | | | 9,4 | 18,1 | 27,0 | 36,5 | 45,5 | 54,0 | | | | | |
| 96,0 | 32,5 | 40,0 | | | 7,5 | 15,8 | 23,9 | 33,0 | 42,0 | 49,5 | | | | | |
| 100,0 | 29,2 | 36,5 | | | 5,8 | 13,7 | 21,0 | 29,7 | 38,0 | 44,5 | | | | | |
| 104,0 | 26,5 | 33,5 | | | | 12,0 | 18,9 | 26,9 | 35,0 | 37,5 | | | | | |
| 108,0 | 23,8 | 26,1 | | | | 11,0 | 17,5 | 20,9 | 23,5 | 24,1 | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| * n * | 11 | 11 | 7 | 10 | 11 | 11 | 11 | 11 | 11 | 11 | | | | - | |
| | | | | | | | | | | | | | | | |
| уу | 15,0 | 15,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | | | | | |
| ZZ | 300,0 | 350,0 | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 | 300,0 | 350,0 | | | | | |
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| o -40 | | | | | | | | | | | | - | | + | |
| _ M _ | 40.5 | 40.0 | 40.0 | 40.0 | 40.5 | 40.0 | 40.5 | 40.0 | 40.0 | 40.0 | | | | | |
| Ш m/s | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | | | | _ | |
| | | | | | | | | | | | | <u> </u> | _ | | _ |
| | | SDB | | | IC | ^ | 1 | 4.0 x | No. | | | | | | |
| | | | | | | 150 | IIT | 14.0 | Į į į | | | | | | |
| | | 108m | · [| | | .00 | | · - | | zz t | | | | | |
| l | JL | | | | JL | t | JL | m | У, | y m | l | J | l | | J |



| 0/4619 | | | | | | | | | | | | 220 | | 22.50 |
|--------------------|--------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|--------------|----------------|----------------|----------------|----------------|----------------|
| | | m | > < t | | CO | DE : | >807 | 77< | | | | V18 | 1 27 | 700 |
| m F m | 114,0 | 114,0 | 114,0 | 114,0 | 114,0 | 114,0 | 114,0 | 114,0 | 114,0 | 114,0 | 114,0 | 114,0 | 114,0 | 114,0 |
| 16,0 | 107,0 | 145,0 | 162,0 | 162,0 | 162,0 | 162,0 | 162,0 | 162,0 | 110,0 | 152,0 | 160,0 | 160,0 | 160,0 | 160,0 |
| 18,0 | 93,0 | 127,0 | 161,0 | 161,0 | 161,0 | 161,0 | 161,0 | 161,0 | 95,0 | 134,0 | 160,0 | 160,0 | 160,0 | 160,0 |
| 20,0 22,0 | 81,0 71,0 | 112,0 100,0 | 144,0 129,0 | 159,0 157,0 | 160,0 160,0 | 160,0 160,0 | 160,0 160,0 | 160,0 160,0 | 83,0 73,0 | 119,0 106,0 | 154,0 138,0 | 160,0 159,0 | 160,0 159,0 | 160,0 159,0 |
| 24,0 | 63,0 | 89,0 | 116,0 | 143,0 | 159,0 | 159,0 | 159,0 | 159,0 | 64,0 | 95,0 | 125,0 | 155,0 | 158,0 | 158,0 |
| 26,0 | 55,0 | 80,0 | 105,0 | 130,0 | 155,0 | 156,0 | 156,0 | 156,0 | 57,0 | 85,0 | 113,0 | 142,0 | 155,0 | 157,0 |
| 28,0 | 48,5 | 72,0 | 95,0 | 119,0 | 142,0 | 152,0 | 154,0 | 154,0 | 50,0 | 77,0 | 103,0 | 130,0 | 149,0 | 155,0 |
| 30,0 | 43,0 | 65,0 | 87,0 | 109,0 | 131,0 | 147,0 | 152,0 | 152,0 | 44,0 | 69,0 | 94,0 | 119,0 | 144,0 | 153,0 |
| 32,0 | 38,0 | 59,0 | 79,0 | 100,0 | 121,0 | 142,0 | 149,0 | 149,0 | 39,0 | 63,0 | 86,0 | 110,0 | 134,0 | 151,0 |
| 34,0 36,0 | 33,5 | 53,0 | 73,0 | 92,0 | 112,0 | 132,0 | 145,0 | 145,0 | 34,5 | 57,0 | 79,0 | 102,0 | 124,0 | 147,0 |
| 38,0 | 29,2 25,5 | 48,0 43,5 | 67,0 61,0 | 85,0 79,0 | 104,0 97,0 | 123,0 115,0 | 138,0 131,0 | 139,0 134,0 | 30,5 26,5 | 52,0 47,0 | 73,0 67,0 | 94,0 88,0 | 116,0 108,0 | 137,0 128,0 |
| 40,0 | 22,1 | 39,0 | 56,0 | 73,0 | 90,0 | 107,0 | 124,0 | 130,0 | 23,1 | 42,5 | 62,0 | 81,0 | 101,0 | 120,0 |
| 44,0 | 16,3 | 32,0 | 47,5 | 63,0 | 79,0 | 94,0 | 109,0 | 120,0 | 17,1 | 35,0 | 53,0 | 71,0 | 88,0 | 106,0 |
| 48,0 | 11,3 | 25,8 | 40,0 | 55,0 | 69,0 | 84,0 | 97,0 | 109,0 | 12,1 | 28,6 | 45,0 | 62,0 | 78,0 | 94,0 |
| 52,0 | 7,1 | 20,5 | 34,0 | 47,5 | 61,0 | 74,0 | 87,0 | 98,0 | 7,8 | 23,1 | 38,5 | 54,0 | 69,0 | 84,0 |
| 56,0 | | 16,0 | 28,5 | 41,0 | 54,0 | 66,0 | 77,0 | 88,0 | | 18,4 | 32,5 | 47,0 | 61,0 | 75,0 |
| 60,0 | | 12,0 | 23,8 | 35,5 | 47,5 | 58,0 | 68,0 | 78,0 | | 14,3 | 27,7 | 41,0 | 55,0 | 66,0 |
| 64,0 68,0 | | 8,5 | 19,6 | 31,0 | 42,0 | 52,0 | 61,0 | 71,0 | | 10,7 | 23,4 | 36,0 | 48,5 | 60,0 |
| 72,0 | | 5,5 | 16,0 12,7 | 26,5 22,6 | 37,0 31,5 | 46,5 40,5 | 55,0 49,0 | 64,0 57,0 | | 7,5 | 19,5 | 31,5 27,4 | 43,0 37,5 | 54,0 47,5 |
| 76,0 | | | 9,8 | 18,8 | 27,3 | 35,5 | 49,0 | 51,0 | | | 16,0 12,9 | 23,2 | 32,5 | 42,0 |
| 80,0 | | | 7,2 | 16,2 | 24,0 | 31,5 | 39,5 | 47,0 | | | 10,2 | 20,3 | 28,9 | 38,0 |
| 84,0 | | | - ,_ | 13,5 | 20,7 | 27,7 | 35,0 | 42,5 | | | 7,7 | 17,4 | 25,2 | 34,0 |
| 88,0 | | | | 11,0 | 17,5 | 23,8 | 31,0 | 38,0 | | | 5,4 | 14,5 | 21,4 | 29,8 |
| 92,0 | | | | 8,7 | 14,7 | 20,6 | 27,5 | 34,0 | | | | 12,0 | 18,4 | 26,2 |
| 96,0 | | | | 6,7 | 12,8 | 18,3 | 24,6 | 31,0 | | | | 10,2 | 16,4 | 23,4 |
| 100,0 104,0 | | | | | 10,9 | 16,1 | 21,8 | 27,8 | | | | 8,4 | 14,3 | 20,6 |
| 104,0 | | | | | 9,0 7,5 | 13,8 12,2 | 18,9 17,0 | 24,6 22,0 | | | | 6,6 5,2 | 12,3 10,6 | 17,8 16,1 |
| 112,0 | | | | | 6,3 | 10,8 | 15,4 | 20,0 | | | | 5,2 | 9,3 | 14,6 |
| , | | | | | 0,0 | 10,0 | 10,4 | 20,0 | | | | | 0,0 | 14,0 |
| | - | | 10 | 10 | 10 | 10 | 10 | 10 | _ | - | 10 | 10 | 4.0 | 4.0 |
| * n * | 7 | 9 | 10 | 10 | 10 | 10 | 10 | 10 | 7 | 9 | 10 | 10 | 10 | 10 |
| уу — | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 15,0 | 15,0 | 15,0 | 15,0 | 15,0 | 15,0 |
| zz _ | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 | 300,0 | 350,0 | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| o-fo m/s | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 |
| | | SDB 114m | | | | 150 t | | 4.0 x 14.0 m | | zz t | | | | |



| 074619 | | | | | | | | | | | | 220 | | | 2.50 |
|--------------|----------------|----------------|--------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------|-----|--|---------|------|
| | | m | > < t | | CO | DE : | >80 | 77< | | 1 | | V18 | 31 2 | 270 |)0 |
| □ M W | 114,0 | 114,0 | 114,0 | 114,0 | 114,0 | 114,0 | 114,0 | 114,0 | 114,0 | 114,0 | | | | | |
| 16,0 | 160,0 | 160,0 | 113,0 | 159,0 | 159,0 | 159,0 | 159,0 | 159,0 | 159,0 | 159,0 | | | | | |
| 18,0 | 160,0 | 160,0 | 98,0 | 144,0 | 158,0 | 158,0 | 158,0 | 158,0 | 158,0 | 158,0 | | | <u> </u> | \perp | |
| 20,0 22,0 | 160,0 159,0 | 160,0 159,0 | 86,0 75,0 | 128,0 114,0 | 157,0 153,0 | 158,0 157,0 | 158,0 | 158,0 157,0 | 158,0 157,0 | 158,0 157,0 | | | | | |
| 24,0 | 158,0 | 158,0 | 66,0 | 103,0 | 139,0 | 157,0 | 157,0 157,0 | 157,0 | 157,0 | 157,0 | | | _ | | |
| 26,0 | 157,0 | 157,0 | 59,0 | 92,0 | 126,0 | 154,0 | 155,0 | 155,0 | 155,0 | 155,0 | | | | | |
| 28,0 | 155,0 | 155,0 | 52,0 | 84,0 | 115,0 | 147,0 | 154,0 | 155,0 | 155,0 | 155,0 | | | | _ | |
| 30,0 | 154,0 | 154,0 | 46,0 | 76,0 | 106,0 | 135,0 | 152,0 | 154,0 | 154,0 | 154,0 | | | | | |
| 32,0 | 152,0 | 152,0 | 41,0 | 69,0 | 97,0 | 125,0 | 151,0 | 153,0 | 153,0 | 153,0 | | | _ | | |
| 34,0 | 149,0 | 149,0 | 36,0 | 63,0 | 89,0 | 116,0 | 143,0 | 151,0 | 152,0 | 152,0 | | | | | |
| 36,0 | 143,0 | 145,0 | 32,0 | 57,0 | 82,0 | 108,0 | 133,0 | 145,0 | 148,0 | 148,0 | | | | | |
| 38,0 | 138,0 | 141,0 | 28,0 | 52,0 | 76,0 | 100,0 | 124,0 | 139,0 | 144,0 | 144,0 | | | | | |
| 40,0 | 132,0 | 137,0 | 24,5 | 47,5 | 71,0 | 94,0 | 117,0 | 133,0 | 140,0 | 140,0 | | | | | |
| 44,0 | 120,0 | 128,0 | 18,5 | 39,5 | 61,0 | 82,0 | 103,0 | 122,0 | 133,0 | 133,0 | | | | | |
| 48,0 | 109,0 | 119,0 | 13,3 | 33,0 | 52,0 | 72,0 | 91,0 | 110,0 | 123,0 | 125,0 | | | | | |
| 52,0 | 98,0 | 109,0 | 8,9 | 27,1 | 45,0 | 63,0 | 82,0 | 99,0 | 112,0 | 116,0 | | | <u> </u> | | |
| 56,0 | 87,0 | 98,0 | 5,2 | 22,1 | 39,0 | 56,0 | 73,0 | 88,0 | 102,0 | 108,0 | | | | | |
| 60,0 64,0 | 77,0 | 89,0 | | 17,8 | 33,5 | 49,5 | 65,0 | 78,0 | 92,0 | 101,0 | | + | <u> </u> | | |
| 64,0 68,0 | 71,0 | 81,0 | | 14,0 | 29,0 | 44,0 | 58,0 | 71,0 | 84,0 | 94,0 | | | | | |
| 72,0 | 64,0 57,0 | 74,0 67,0 | | 10,6 7,6 | 24,8 21,0 | 39,0 34,0 | 52,0 46,0 | 65,0 58,0 | 77,0 69,0 | 87,0 80,0 | | + | \vdash | + | |
| 76,0 | 51,0 | 60,0 | | 7,0 | 17,7 | 29,6 | 41,0 | 52,0 | 63,0 | 73,0 | | | | | |
| 80,0 | 47,0 | 55,0 | | | 14,7 | 26,1 | 36,5 | 47,5 | 58,0 | 68,0 | | | | | |
| 84,0 | 42,5 | 51,0 | | | 12,0 | 22,6 | 32,5 | 43,0 | 53,0 | 63,0 | | | | | |
| 88,0 | 38,0 | 46,0 | | | 9,6 | 19,1 | 28,6 | 38,5 | 48,0 | 57,0 | | | | | |
| 92,0 | 34,0 | 41,5 | | | 7,4 | 16,2 | 25,1 | 34,5 | 43,5 | 52,0 | | | | | |
| 96,0 | 31,0 | 38,0 | | | 5,4 | 14,3 | 22,4 | 31,0 | 40,0 | 48,0 | | | | | |
| 100,0 | 27,6 | 35,0 | | | | 12,3 | 19,7 | 28,0 | 36,5 | 44,0 | | | | | |
| 104,0 | 24,4 | 31,5 | | | | 10,3 | 17,1 | 24,9 | 33,0 | 40,0 | | | | | |
| 108,0 | 21,9 | 28,6 | | | | 8,8 | 15,4 | 22,3 | 30,5 | 34,5 | | | └ | | |
| 112,0 | 19,8 | 24,3 | | | | 7,6 | 13,9 | 18,8 | 24,2 | 25,8 | | | | | |
| | | | | | | | | | | | | | | | |
| * n * | 10 | 10 | 7 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | | | | - | |
| уу — | 15,0 | 15,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | | + | | + | |
| ZZ | 300,0 | 350,0 | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 | 300,0 | 350,0 | | 1 | | + | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | <u> </u> | | |
| | | | | | | | | | | | | | | | |
| - 1- | | | | | | | | | | | | + | - | + | |
| o -∦o | | | | | | | | | | | | | | | |
| ⋓ m/s | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | | | | \perp | |
| | | | | | | | | | | | | | | \perp | |
| | | SDB | | | | <u>~</u> | | 4.0 x | № . | | \bigcap | | \bigcap | | 7 |
| | | 300 | | | | 150 | | 110 | | | | | | | |
| | | 114m | | | | 150 | | 14.0 📘 | | zz t | | | | | |
| L | JL | | | | JL | t | JL | m | У | y m 22 ' | l | J | l | | J |



| 074619 | | | | | | | | | | | | 220 | 4 | 22.50 |
|---------------|--------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------|----------------|----------------|----------------|----------------|-------------------|
| | | m | > < t | | CO | DE : | >80 | 78< | | | | V18 | 1 28 | 300 |
| m m | 120,0 | 120,0 | 120,0 | 120,0 | 120,0 | 120,0 | 120,0 | 120,0 | 120,0 | 120,0 | 120,0 | 120,0 | 120,0 | 120,0 |
| 16,0 | 103,0 | 140,0 | 143,0 | 143,0 | 143,0 | 143,0 | 143,0 | 143,0 | 105,0 | 142,0 | 142,0 | 142,0 | 142,0 | 142,0 |
| 18,0 20,0 | 89,0 78,0 | 123,0 108,0 | 143,0 139,0 | 143,0 142,0 | 143,0 142,0 | 143,0 142,0 | 143,0 142,0 | 143,0 142,0 | 91,0 80,0 | 129,0 114,0 | 142,0 141,0 | 142,0 141,0 | 142,0 141,0 | 142,0 141,0 |
| 22,0 | 68,0 | 96,0 | 125,0 | 142,0 | 142,0 | 142,0 | 142,0 | 142,0 | 70,0 | 102,0 | 134,0 | 141,0 | 141,0 | 141,0 |
| 24,0 | 60,0 | 86,0 | 112,0 | 139,0 | 141,0 | 141,0 | 141,0 | 141,0 | 61,0 | 91,0 | 121,0 | 141,0 | 141,0 | 141,0 |
| 26,0 | 52,0 | 77,0 | 102,0 | 126,0 | 141,0 | 141,0 | 141,0 | 141,0 | 54,0 | 82,0 | 110,0 | 138,0 | 140,0 | 140,0 |
| 28,0 | 46,0 | 69,0 | 92,0 | 115,0 | 135,0 | 138,0 | 138,0 | 138,0 | 47,5 | 74,0 | 100,0 | 126,0 | 136,0 | 138,0 |
| 30,0 32,0 | 40,5 35,5 | 62,0 56,0 | 84,0 77,0 | 106,0 97,0 | 127,0 118,0 | 135,0 132,0 | 136,0 134,0 | 136,0 134,0 | 41,5 36,5 | 67,0 60,0 | 91,0 84,0 | 116,0 107,0 | 133,0 129,0 | 137,0 135,0 |
| 34,0 | 31,0 | 51,0 | 70,0 | 90,0 | 109,0 | 128,0 | 132,0 | 132,0 | 32,0 | 54,0 | 77,0 | 99,0 | 121,0 | 134,0 |
| 36,0 | 27,1 | 45,5 | 64,0 | 83,0 | 101,0 | 120,0 | 128,0 | 129,0 | 28,1 | 49,0 | 70,0 | 91,0 | 113,0 | 130,0 |
| 38,0 | 23,4 | 41,0 | 59,0 | 76,0 | 94,0 | 112,0 | 123,0 | 125,0 | 24,4 | 44,5 | 65,0 | 85,0 | 105,0 | 124,0 |
| 40,0 | 20,1 | 37,0 | 54,0 | 71,0 | 88,0 | 104,0 | 117,0 | 121,0 | 21,1 | 40,5 | 60,0 | 79,0 | 98,0 | 117,0 |
| 44,0 48,0 | 14,4 | 29,8 | 45,5 | 61,0 | 76,0 | 92,0 | 106,0 | 114,0 | 15,2 | 33,0 | 51,0 | 68,0 | 86,0 76.0 | 104,0 |
| 52,0 | 9,5 5,3 | 23,8 18,6 | 38,0 32,0 | 52,0 45,5 | 67,0 59,0 | 81,0 72,0 | 94,0 85,0 | 106,0 96,0 | 10,3 6,0 | 26,6 21,2 | 43,0 36,5 | 59,0 52,0 | 76,0 67,0 | 92,0 82,0 |
| 56,0 | 0,0 | 14,1 | 26,6 | 39,0 | 52,0 | 64,0 | 76,0 | 87,0 | 0,0 | 16,6 | 31,0 | 45,0 | 59,0 | 73,0 |
| 60,0 | | 10,2 | 21,9 | 33,5 | 45,5 | 57,0 | 67,0 | 77,0 | | 12,5 | 25,8 | 39,0 | 52,0 | 65,0 |
| 64,0 | | 6,8 | 17,8 | 28,8 | 40,0 | 50,0 | 59,0 | 69,0 | | 8,9 | 21,5 | 34,0 | 46,5 | 58,0 |
| 68,0 | | | 14,2 | 24,6 | 35,0 | 45,0 | 54,0 | 63,0 | | 5,8 | 17,7 | 29,6 | 41,5 | 52,0 |
| 72,0 76,0 | | | 10,9 8,0 | 20,8 17,5 | 30,5 25,8 | 39,5 34,0 | 48,0 42,5 | 56,0 50,0 | | | 14,2 11,2 | 25,5 21,6 | 36,5 31,5 | 46,5 41,0 |
| 80,0 | | | 5,4 | 14,4 | 22,0 | 29,8 | 37,5 | 45,0 | | | 8,4 | 18,1 | 27,2 | 36,0 |
| 84,0 | | | ٥, . | 11,7 | 19,2 | 26,4 | 33,5 | 41,0 | | | 6,0 | 15,7 | 24,1 | 32,5 |
| 88,0 | | | | 9,2 | 16,5 | 23,1 | 29,9 | 37,0 | | | | 13,1 | 20,9 | 28,6 |
| 92,0 | | | | 7,0 | 13,8 | 19,7 | 26,1 | 33,0 | | | | 10,7 | 17,8 | 24,8 |
| 96,0 100,0 | | | | | 11,3 | 16,7 | 22,6 | 29,2 | | | | 8,5 | 15,0 | 21,4 |
| 104,0 | | | | | 9,6 7,9 | 14,8 12,9 | 20,4 18,1 | 26,4 23,5 | | | | 6,6 | 13,1 11,3 | 19,2 17,1 |
| 108,0 | | | | | 6,2 | 11,0 | 15,8 | 20,7 | | | | | 9,4 | 14,9 |
| 112,0 | | | | | , | 9,3 | 13,9 | 18,5 | | | | | 7,8 | 13,0 |
| 116,0 | | | | | | 7,9 | 12,3 | 16,7 | | | | | 6,4 | 11,5 |
| 120,0 | | | | | | 7,0 | 11,3 | 15,5 | | | | | 5,6 | 10,5 |
| * n * | 6 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 7 | 9 | 9 | 9 | 9 | 9 |
| уу — | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 15,0 | 15,0 | 15,0 | 15,0 | 15,0 | 15,0 |
| zz | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 | 300,0 | 350,0 | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| _ | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| o -40 | | | | | | | | | | | | | | |
| ⋓ m/s | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 |
| | | 055 | | | 1 | <u>م</u> | ור | 4.0 x | <u> </u> | | | | | $\overline{\ \ }$ |
| | | SDB | | | | 150 | | 14.0 | | | | | | |
| | | 120m | | | | t | | 14.0] | ■ | zz t y m | | | | |
| | | | | | | • | _ | | , | | | | | |



| 074619 | | | | | | | | | | | | 220 | | | 2.50 |
|--------------|----------------|----------------|--------------|--------------|----------------|----------------|----------------|--------------------|----------------|----------------|----------------------|-----|----|-----------------|-------------------|
| | | m | > < t | | CO | DE : | >807 | 78< | | | | V18 | 31 | 28 | 00 |
| ₽ M | 120,0 | 120,0 | 120,0 | 120,0 | 120,0 | 120,0 | 120,0 | 120,0 | 120,0 | 120,0 | | | | | |
| 16,0 | 142,0 | 142,0 | 108,0 | 141,0 | 141,0 | 141,0 | 141,0 | 141,0 | 141,0 | 141,0 | | | | | |
| 18,0 | 142,0 | 142,0 | 94,0 | 139,0 | 140,0 | 140,0 | 140,0 | 140,0 | 140,0 | 140,0 | | | | | |
| 20,0 | 141,0 | 141,0 | 82,0 | 123,0 | 140,0 | 140,0 | 140,0 | 140,0 | 140,0 | 140,0 | | | | | |
| 22,0 | 141,0 | 141,0 | 72,0 | 110,0 | 140,0 | 140,0 | 140,0 | 140,0 | 140,0 | 140,0 | | | | _ | |
| 24,0 | 141,0 | 141,0 | 63,0 | 99,0 | 134,0 | 139,0 | 139,0 | 139,0 | 139,0 | 139,0 | | | | | |
| 26,0 28,0 | 140,0 138,0 | 140,0 138,0 | 56,0 49,5 | 89,0 81,0 | 122,0 112,0 | 139,0 135,0 | 139,0 137,0 | 139,0 137,0 | 139,0 137,0 | 139,0 137,0 | | | | _ | |
| 30,0 | 137,0 | 137,0 | 43,5 | 73,0 | 102,0 | 130,0 | 135,0 | 135,0 | 135,0 | 135,0 | | | | | |
| 32,0 | 135,0 | 135,0 | 38,5 | 66,0 | 94,0 | 122,0 | 133,0 | 133,0 | 133,0 | 133,0 | | | | - | |
| 34,0 | 134,0 | 134,0 | 34,0 | 60,0 | 86,0 | 113,0 | 131,0 | 131,0 | 131,0 | 131,0 | | | | | |
| 36,0 | 131,0 | 131,0 | 29,7 | 55,0 | 80,0 | 105,0 | 127,0 | 128,0 | 128,0 | 128,0 | | | | | |
| 38,0 | 127,0 | 127,0 | 25,9 | 50,0 | 74,0 | 97,0 | 121,0 | 125,0 | 125,0 | 125,0 | | | | | |
| 40,0 | 122,0 | 125,0 | 22,5 | 45,5 | 68,0 | 91,0 | 114,0 | 121,0 | 123,0 | 123,0 | | | | | |
| 44,0 | 114,0 | 118,0 | 16,5 | 37,5 | 58,0 | 79,0 | 100,0 | 114,0 | 118,0 | 118,0 | | | | | |
| 48,0 | 106,0 | 112,0 | 11,5 | 31,0 | 50,0 | 70,0 | 89,0 | 107,0 | 113,0 | 113,0 | | | 1 | \dashv | |
| 52,0 | 96,0 | 103,0 | 7,1 | 25,1 | 43,0 | 61,0 | 79,0 | 97,0 | 105,0 | 107,0 | | | | | |
| 56,0 | 86,0 | 95,0 | , | 20,2 | 37,0 | 54,0 | 71,0 | 87,0 | 97,0 | 101,0 | | | 1 | $\neg \uparrow$ | |
| 60,0 | 77,0 | 87,0 | | 15,9 | 31,5 | 47,5 | 63,0 | 77,0 | 89,0 | 95,0 | | | | | |
| 64,0 | 69,0 | 79,0 | | 12,2 | 27,1 | 42,0 | 57,0 | 69,0 | 82,0 | 89,0 | | | | | |
| 68,0 | 62,0 | 73,0 | | 8,8 | 22,9 | 37,0 | 51,0 | 63,0 | 75,0 | 83,0 | | | | | |
| 72,0 | 56,0 | 66,0 | | 5,9 | 19,2 | 32,5 | 45,5 | 57,0 | 68,0 | 77,0 | | | | | |
| 76,0 | 50,0 | 59,0 | | , | 15,9 | 28,2 | 39,5 | 51,0 | 61,0 | 71,0 | | | | | |
| 80,0 | 45,0 | 54,0 | | | 13,0 | 24,2 | 35,0 | 45,5 | 56,0 | 66,0 | | | | | |
| 84,0 | 41,0 | 49,0 | | | 10,3 | 21,3 | 31,0 | 41,5 | 51,0 | 61,0 | | | | | |
| 88,0 | 37,0 | 45,0 | | | 7,9 | 18,4 | 27,5 | 37,5 | 47,0 | 56,0 | | | | | |
| 92,0 | 33,0 | 40,5 | | | 5,7 | 15,5 | 23,7 | 33,0 | 42,5 | 52,0 | | | | | |
| 96,0 | 29,0 | 36,5 | | | | 12,9 | 20,4 | 29,3 | 38,5 | 47,0 | | | | | |
| 100,0 | 26,2 | 33,5 | | | | 11,1 | 18,3 | 26,5 | 35,0 | 43,0 | | | | | |
| 104,0 | 23,4 | 30,0 | | | | 9,3 | 16,2 | 23,7 | 32,0 | 39,5 | | | | | |
| 108,0 | 20,5 | 27,0 | | | | 7,6 | 14,0 | 20,8 | 28,8 | 35,5 | | | | | |
| 112,0 | 18,3 | 24,3 | | | | 6,0 | 12,3 | 18,6 | 26,0 | 31,0 | | | | | |
| 116,0 | 16,5 | 21,9 | | | | | 10,8 | 16,8 | 23,5 | 25,4 | | | | | |
| 120,0 | 15,2 | 16,6 | | | | | 9,9 | 12,6 | 14,5 | 15,1 | | | | | |
| * n * | 9 | 9 | 7 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | | | | # | |
| | 45.0 | 45.0 | 40.0 | 40.0 | 40.0 | 40.0 | 40.0 | 40.0 | 40.0 | 40.0 | | | | | |
| уу | 15,0 | 15,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 250,0 | 18,0 | 18,0 | | | | -+ | |
| ZZ | 300,0 | 350,0 | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 | 300,0 | 350,0 | | | | - | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | _ | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | \perp | |
| 0-∯0 | 40.0 | 40.0 | 40.0 | 40.0 | 40.0 | 40.0 | 40.0 | 40.0 | 40.0 | 40.0 | | | | | |
| Ш m/s | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | | | | _+ | |
| | | SDB | | | 7[- | | 1. | 4.0 x | | | $\overline{\bigcap}$ | | | | $\overline{\ \ }$ |
| | | 120m | | | | 150 t | | 14.0 T m | □ V | zz t y m | | | | | |



| 074619 | | | | | | | | | | | | 220 | | 22.50 |
|-----------------|--------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|--------------|----------------|----------------|----------------|----------------|-------------------|
| | | m | > < t | | CO | DE : | >807 | 79< | | | | V18 | 1 29 | 900 |
| ₽ M | 126,0 | 126,0 | 126,0 | 126,0 | 126,0 | 126,0 | 126,0 | 126,0 | 126,0 | 126,0 | 126,0 | 126,0 | 126,0 | 126,0 |
| 16,0 | | | | | | | | | | 124,0 | 125,0 | 125,0 | 125,0 | 125,0 |
| 18,0 20,0 | 86,0 75,0 | 119,0 105,0 | 125,0 124,0 | 125,0 124,0 | 125,0 124,0 | 125,0 124,0 | 125,0 124,0 | 125,0 124,0 | 88,0 77,0 | 125,0 111,0 | 125,0 124,0 | 125,0 124,0 | 125,0 124,0 | 125,0 124,0 |
| 22,0 | 65,0 | 93,0 | 121,0 | 124,0 | 124,0 | 124,0 | 124,0 | 124,0 | 67,0 | 99,0 | 123,0 | 123,0 | 123,0 | 123,0 |
| 24,0 | 57,0 | 83,0 | 109,0 | 123,0 | 123,0 | 123,0 | 123,0 | 123,0 | 59,0 | 88,0 | 118,0 | 123,0 | 123,0 | 123,0 |
| 26,0 | 50,0 | 74,0 | 99,0 | 123,0 | 123,0 | 123,0 | 123,0 | 123,0 | 52,0 | 79,0 | 107,0 | 123,0 | 123,0 | 123,0 |
| 28,0 30,0 | 44,0 | 67,0 | 90,0 | 112,0 | 121,0 | 121,0 | 121,0 | 121,0 | 45,5 | 71,0 | 97,0 | 121,0 | 121,0 | 121,0 |
| 32,0 | 38,5 33,5 | 60,0 54,0 | 82,0 74,0 | 103,0 95,0 | 117,0 113,0 | 120,0 119,0 | 120,0 119,0 | 120,0 119,0 | 40,0 35,0 | 64,0 58,0 | 89,0 81,0 | 113,0 104,0 | 120,0 118,0 | 121,0 121,0 |
| 34,0 | 29,3 | 48,5 | 68,0 | 87,0 | 106,0 | 118,0 | 118,0 | 118,0 | 30,5 | 52,0 | 74,0 | 96,0 | 116,0 | 120,0 |
| 36,0 | 25,4 | 43,5 | 62,0 | 80,0 | 99,0 | 117,0 | 117,0 | 117,0 | 26,4 | 47,5 | 68,0 | 89,0 | 110,0 | 120,0 |
| 38,0 | 21,8 | 39,5 | 57,0 | 74,0 | 92,0 | 109,0 | 113,0 | 114,0 | 22,8 | 42,5 | 63,0 | 83,0 | 102,0 | 116,0 |
| 40,0 44,0 | 18,6 | 35,5 | 52,0 | 69,0 | 85,0 | 102,0 | 109,0 | 111,0 | 19,5 | 38,5 | 58,0 | 77,0 | 96,0 | 111,0 |
| 44,0 | 12,9 8,0 | 28,2 22,2 | 43,5 36,5 | 59,0 51,0 | 74,0 65,0 | 90,0 79,0 | 100,0 91,0 | 105,0 99,0 | 13,7 8,8 | 31,0 25,0 | 48,5 41,0 | 66,0 57,0 | 84,0 74,0 | 101,0 90,0 |
| 52,0 | 0,0 | 17,1 | 30,5 | 43,5 | 57,0 | 70,0 | 83,0 | 92,0 | 0,0 | 19,7 | 35,0 | 50,0 | 65,0 | 80,0 |
| 56,0 | | 12,7 | 25,0 | 37,5 | 49,5 | 62,0 | 74,0 | 84,0 | | 15,1 | 29,2 | 43,5 | 57,0 | 71,0 |
| 60,0 | | 8,8 | 20,4 | 32,0 | 43,5 | 55,0 | 66,0 | 75,0 | | 11,0 | 24,3 | 37,5 | 51,0 | 64,0 |
| 64,0 68.0 | | 5,4 | 16,3 | 27,3 | 38,0 | 48,5 | 58,0 | 67,0 | | 7,5 | 20,0 | 32,5 | 45,0 | 56,0 |
| 68,0 72,0 | | | 12,7 9,4 | 23,0 19,3 | 33,5 29,1 | 43,0 38,0 | 52,0 46,5 | 61,0 55,0 | | | 16,1 12,7 | 28,0 23,9 | 40,0 35,0 | 50,0 45,0 |
| 76,0 | | | 6,5 | 15,9 | 24,8 | 33,0 | 41,5 | 49,5 | | | 9,7 | 20,3 | 30,5 | 40,0 |
| 80,0 | | | -,- | 12,9 | 20,3 | 28,2 | 36,0 | 44,0 | | | 6,9 | 17,1 | 25,5 | 35,0 |
| 84,0 | | | | 10,1 | 17,1 | 24,5 | 32,0 | 39,0 | | | | 14,1 | 22,0 | 30,5 |
| 88,0 | | | | 7,6 | 14,8 | 21,6 | 28,4 | 35,5 | | | | 11,5 | 19,3 | 27,3 |
| 92,0 96,0 | | | | 5,3 | 12,5 10,3 | 18,8 | 25,0 21,5 | 31,5 27,9 | | | | 9,0 6,8 | 16,7 14,0 | 23,9 20,5 |
| 100,0 | | | | | 8,1 | 16,0 13,3 | 18,2 | 24,2 | | | | 0,0 | 11,5 | 17,3 |
| 104,0 | | | | | 6,5 | 11,5 | 16,3 | 21,9 | | | | | 9,8 | 15,4 |
| 108,0 | | | | | | 9,7 | 14,4 | 19,5 | | | | | 8,1 | 13,5 |
| 112,0 116,0 | | | | | | 8,0 | 12,5 | 17,1 | | | | | 6,4 | 11,7 |
| 120,0 | | | | | | 6,3 | 10,7 9,2 | 15,0 13,4 | | | | | | 9,9 8,4 |
| 124,0 | | | | | | | 8,0 | 12,1 | | | | | | 7,3 |
| * n * | 5 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 6 | 8 | 8 | 8 | 8 | 8 |
| уу — | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 15,0 | 15,0 | 15,0 | 15,0 | 15,0 | 15,0 |
| ZZ | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 | 300,0 | 350,0 | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 |
| _ | | | | | | | | | | | | | | |
| _ ı _ | | | | | | | | | | | | | | |
| 0-40 m/s | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 |
| | | SDB 126m | | | | 150 t | | 4.0 x 14.0 m | y | zz t | | | | $\overline{\ \ }$ |



| 0/4619 | | | | | | | | | | | | 220 | | | .50 |
|---------------|-------|-------|---------|-------|-------|----------|-------|------------------|----------|-------|---|-----|------|---|-----|
| | | m | ı > < t | | CO | DE : | >807 | 79< | | | | V18 | 31 2 | 290 |)0 |
| ₽ m | 126,0 | 126,0 | 126,0 | 126,0 | 126,0 | 126,0 | 126,0 | 126,0 | 126,0 | 126,0 | | | | | |
| 16,0 | 125,0 | 125,0 | | 123,0 | 123,0 | 123,0 | 123,0 | 123,0 | 123,0 | 123,0 | | | | | |
| 18,0 | 125,0 | 125,0 | 91,0 | 123,0 | 123,0 | 123,0 | 123,0 | 123,0 | 123,0 | 123,0 | | | | | |
| 20,0 | 124,0 | 124,0 | 79,0 | 120,0 | 122,0 | 122,0 | 122,0 | 122,0 | 122,0 | 122,0 | | | | | |
| 22,0 | 123,0 | 123,0 | 69,0 | 107,0 | 122,0 | 122,0 | 122,0 | 122,0 | 122,0 | 122,0 | | | | | |
| 24,0 | 123,0 | 123,0 | 61,0 | 96,0 | 122,0 | 122,0 | 122,0 | 122,0 | 122,0 | 122,0 | | | | | |
| 26,0 | 123,0 | 123,0 | 54,0 | 86,0 | 119,0 | 121,0 | 121,0 | 121,0 | 121,0 | 121,0 | | | | | |
| 28,0 | 121,0 | 121,0 | 47,5 | 78,0 | 109,0 | 120,0 | 121,0 | 121,0 | 121,0 | 121,0 | | | | | |
| 30,0 | 121,0 | 121,0 | 41,5 | 71,0 | 100,0 | 117,0 | 120,0 | 120,0 | 120,0 | 120,0 | | | | | |
| 32,0 | 121,0 | 121,0 | 36,5 | 64,0 | 91,0 | 115,0 | 120,0 | 120,0 | 120,0 | 120,0 | | | | | |
| 34,0 | 120,0 | 120,0 | 32,0 | 58,0 | 84,0 | 110,0 | 119,0 | 119,0 | 119,0 | 119,0 | | | | | |
| 36,0 | 120,0 | 120,0 | 28,0 | 53,0 | 77,0 | 102,0 | 119,0 | 119,0 | 119,0 | 119,0 | | | | | |
| 38,0 | 117,0 | 117,0 | 24,3 | 48,0 | 72,0 | 95,0 | 115,0 | 116,0 | 116,0 | 116,0 | | | | | |
| 40,0 | 114,0 | 114,0 | 20,9 | 43,5 | 66,0 | 89,0 | 110,0 | 113,0 | 115,0 | 115,0 | | | | | |
| 44,0 | 107,0 | 108,0 | 15,0 | 36,0 | 56,0 | 77,0 | 98,0 | 107,0 | 110,0 | 110,0 | | 1 | | \perp | |
| 48,0 | 101,0 | 103,0 | 10,0 | 29,2 | 48,5 | 68,0 | 87,0 | 102,0 | 106,0 | 106,0 | | | | | |
| 52,0 | 94,0 | 97,0 | 5,7 | 23,6 | 41,5 | 59,0 | 77,0 | 95,0 | 100,0 | 101,0 | | | | | |
| 56,0 | 85,0 | 90,0 | | 18,7 | 35,5 | 52,0 | 69,0 | 85,0 | 93,0 | 95,0 | | | | | |
| 60,0 | 76,0 | 83,0 | | 14,5 | 30,0 | 46,0 | 62,0 | 77,0 | 86,0 | 89,0 | | | | | |
| 64,0 | 67,0 | 77,0 | | 10,7 | 25,5 | 40,5 | 55,0 | 68,0 | 80,0 | 83,0 | | | | | |
| 68,0 | 61,0 | 71,0 | | 7,4 | 21,4 | 35,5 | 49,0 | 61,0 | 73,0 | 78,0 | | | | | |
| 72,0 | 55,0 | 64,0 | | | 17,7 | 31,0 | 44,0 | 56,0 | 67,0 | 73,0 | | | | | |
| 76,0 | 49,0 | 58,0 | | | 14,4 | 27,0 | 38,5 | 50,0 | 61,0 | 68,0 | | | | | |
| 80,0 | 43,5 | 52,0 | | | 11,4 | 22,4 | 33,5 | 44,5 | 55,0 | 63,0 | | | | | |
| 84,0 | 39,0 | 47,5 | | | 8,7 | 19,0 | 29,4 | 39,5 | 49,5 | 58,0 | | | | | |
| 88,0 | 35,0 | 43,5 | | | 6,3 | 16,6 | 26,2 | 36,0 | 45,5 | 54,0 | | | | | |
| 92,0 | 31,5 | 39,0 | | | | 14,2 | 22,9 | 32,0 | 41,5 | 49,5 | | | | | |
| 96,0 | 27,7 | 35,0 | | | | 11,8 | 19,7 | 28,3 | 37,0 | 45,5 | | | | | |
| 100,0 | 24,1 | 31,0 | | | | 9,5 | 16,6 | 24,7 | 33,5 | 41,5 | | | | | |
| 104,0 | 21,7 | 28,4 | | | | 7,9 | 14,7 | 22,2 | 30,5 | 38,0 | | | | | |
| 108,0 | 19,4 | 25,5 | | | | 6,1 | 12,8 | 19,8 | 27,4 | 34,0 | | | | | |
| 112,0 | 17,0 | 22,6 | | | | | 10,9 | 17,4 | 24,4 | 30,5 | | | | | |
| 116,0 | 14,8 | 20,0 | | | | | 9,2 | 15,2 | 21,7 | 27,0 | | | | | |
| 120,0 | 13,3 | 18,1 | | | | | 7,7 | 13,6 | 19,6 | 22,7 | | | | | |
| 124,0 | 12,0 | 14,8 | | | | | 6,6 | 10,8 | 14,3 | 15,6 | | | | | |
| * n * | 8 | 8 | 6 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | | | | | |
| | | | | | | | | | | | | | | | |
| уу — | 15,0 | 15,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | | | | | |
| ZZ | 300,0 | 350,0 | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 | 300,0 | 350,0 | | | | | |
| | | | | | | | | | | | | | | | |
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| 5-40 | | | | | | | | | | | | | | | |
| M - | 40.0 | 40.0 | 46.6 | 400 | 400 | 46.6 | 40.0 | 40.0 | 40.0 | 40.0 | | | | | |
| ⋓ m/s | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | | 1 | | $-\!$ | |
| | | | | | | | | | | | | | | | |
| $\overline{}$ | | | | | 7 | | | | | A . | | | | | 7 |
| | | SDB | | | | <u>^</u> | 14 | 4.0 x | NO. | | 1 | | | | |
| | | | | | | 150 | IIT | 14.0 | ₩ | | | | | | |
| | | 126m | · | | | .00 | | ' ⁰ 👗 | | zz t | 1 | | | | |
| l | JL | | | | JL | t | JL | m | У. | y m | l | J | l | | J |



| 0/4619 | , | m> <t code="">8080<</t> | | | | | | | | | | 220 | | 22.50 |
|----------------|--------------|----------------------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------|---------------|----------------|----------------|----------------|----------------|
| | | m | > < t | | CO | DE : | >808 | 30< | | | , | V18 | 1 2/ | 400 |
| ■ m | 132,0 | 132,0 | 132,0 | 132,0 | 132,0 | 132,0 | 132,0 | 132,0 | 132,0 | 132,0 | 132,0 | 132,0 | 132,0 | 132,0 |
| 18,0 | 82,0 | 109,0 | 109,0 | 109,0 | 109,0 | 109,0 | 109,0 | 109,0 | 84,0 | 109,0 | 109,0 | 109,0 | 109,0 | 109,0 |
| 20,0 22,0 | 71,0 62,0 | 101,0 89,0 | 108,0 107,0 | 108,0 107,0 | 108,0 107,0 | 108,0 107,0 | 108,0 107,0 | 108,0 107,0 | 73,0 64,0 | 107,0 95,0 | 108,0 107,0 | 108,0 107,0 | 108,0 107,0 | 108,0 107,0 |
| 24,0 | 54,0 | 80,0 | 105,0 | 106,0 | 106,0 | 106,0 | 106,0 | 106,0 | 56,0 | 85,0 | 107,0 | 107,0 | 107,0 | 107,0 |
| 26,0 | 47,0 | 71,0 | 95,0 | 106,0 | 106,0 | 106,0 | 106,0 | 106,0 | 48,5 | 76,0 | 103,0 | 106,0 | 106,0 | 106,0 |
| 28,0 30,0 | 41,0 35,5 | 64,0 57,0 | 86,0 78,0 | 105,0 99,0 | 105,0 103,0 | 105,0 104,0 | 105,0 104,0 | 105,0 104,0 | 42,5 37,0 | 68,0 61,0 | 94,0 85,0 | 105,0 103,0 | 105,0 104,0 | 105,0 104,0 |
| 32,0 | 31,0 | 51,0 | 71,0 | 91,0 | 101,0 | 103,0 | 103,0 | 103,0 | 32,0 | 55,0 | 78,0 | 99,0 | 104,0 | 104,0 |
| 34,0 | 26,7 | 45,5 | 65,0 | 84,0 | 99,0 | 103,0 | 103,0 | 103,0 | 27,8 | 49,5 | 71,0 | 93,0 | 104,0 | 104,0 |
| 36,0 | 22,8 | 41,0 | 59,0 | 77,0 | 95,0 | 102,0 | 102,0 | 102,0 | 23,8 | 44,5 | 65,0 | 86,0 | 103,0 | 103,0 |
| 38,0 40,0 | 19,3 16,1 | 36,5 32,5 | 54,0 49,0 | 71,0 66,0 | 88,0 82,0 | 101,0 97,0 | 101,0 98,0 | 101,0 98,0 | 20,3 17,0 | 40,0 36,0 | 60,0 55,0 | 79,0 74,0 | 99,0 92,0 | 102,0 98,0 |
| 44,0 | 10,1 | 25,7 | 49,0 | 56,0 | 71,0 | 87,0 | 91,0 | 94,0 | 11,3 | 28,7 | 46,0 | 63,0 | 81,0 | 91,0 |
| 48,0 | 5,7 | 19,8 | 34,0 | 48,0 | 62,0 | 76,0 | 85,0 | 89,0 | 6,5 | 22,6 | 38,5 | 55,0 | 71,0 | 84,0 |
| 52,0 | | 14,7 | 27,8 | 41,0 | 54,0 | 67,0 | 79,0 | 84,0 | | 17,3 | 32,0 | 47,0 | 62,0 | 77,0 |
| 56,0 | | 10,3 | 22,6 | 35,0 | 47,0 | 59,0 | 71,0 | 78,0 | | 12,7 | 26,7 | 40,5 | 55,0 | 69,0 |
| 60,0 64,0 | | 6,5 | 18,0 14,0 | 29,5 24,8 | 41,0 35,5 | 53,0 46,5 | 64,0 56,0 | 71,0 64,0 | | 8,7 5,2 | 21,9 17,6 | 35,0 30,0 | 48,0 42,5 | 61,0 55,0 |
| 68,0 | | | 10,4 | 20,7 | 31,0 | 40,0 | 49,0 | 58,0 | | 5,2 | 13,8 | 25,6 | 37,0 | 47,5 |
| 72,0 | | | 7,2 | 16,9 | 26,7 | 35,5 | 44,0 | 52,0 | | | 10,4 | 21,6 | 32,5 | 43,0 |
| 76,0 | | | | 13,6 | 22,9 | 31,0 | 39,0 | 47,5 | | | 7,4 | 18,0 | 28,3 | 38,0 |
| 80,0 84,0 | | | | 10,6 | 19,3 | 26,4 | 34,5 | 42,0 | | | | 14,8 | 23,9 | 33,0 |
| 88,0 | | | | 7,8 5,3 | 15,5 12,8 | 21,8 18,7 | 29,4 25,9 | 37,0 33,0 | | | | 11,8 9,2 | 19,6 16,6 | 28,1 24,6 |
| 92,0 | | | | 0,0 | 10,7 | 16,3 | 23,0 | 29,4 | | | | 6,8 | 14,4 | 21,8 |
| 96,0 | | | | | 8,5 | 14,0 | 20,1 | 26,0 | | | | , | 12,2 | 19,0 |
| 100,0 | | | | | 6,3 | 11,7 | 17,2 | 22,5 | | | | | 9,9 | 16,2 |
| 104,0 108,0 | | | | | | 9,4 | 14,3 12,5 | 19,1 17,2 | | | | | 7,7 6,2 | 13,4 11,6 |
| 112,0 | | | | | | 7,8 6,2 | 10,8 | 15,3 | | | | | 0,2 | 9,9 |
| 116,0 | | | | | | | 9,0 | 13,4 | | | | | | 8,2 |
| 120,0 | | | | | | | 7,3 | 11,5 | | | | | | 6,5 |
| 124,0 128,0 | | | | | | | 5,9 | 10,0 | | | | | | 5,2 |
| * n * | 5 | 7 | 7 | 7 | 7 | 7 | 7 | 8,7 7 | 5 | 7 | 7 | 7 | 7 | 7 |
| | - | | | | | | | | | | | | | |
| уу | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 15,0 | 15,0 | 15,0 | 15,0 | 15,0 | 15,0 |
| ZZ | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 | 300,0 | 350,0 | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 |
| | | | | | | | | | | | | | | |
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| o -∤o | | | | | | | | | | | | | | |
| ■ m/s | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 |
| | | | | | | | | | | | | | | |
| | | | | | 7 | | | 4.0 | <u></u> | AD. | | | | |
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| | | 132m | | | | 150 | | 14.0 | | ₩ | | | | |
| l | JL | . 5= | | | JĽ | t | | m | У | y m | | J | l | J |



| 074619 | | | | | \sim | DE - | 000 | 2Ω - | | | | 220 \ / 1 O | | 22.50 \ |
|---|-------------|--------------|---------------|---------------|---------------|---------------|---------------------------|--------------------|-------------|--------------|---------------|-----------------------|---------------|---------------|
| | | | 1 > < t | | | | >808 | | | | | V18 | | |
| i Meritanian di manganan di m | 132,0 | 132,0 | 132,0 | 132,0 | 132,0 | 132,0 | 132,0 | 132,0 | 132,0 | 132,0 | 132,0 | 132,0 | 132,0 | 132,0 |
| 132,0 | | | | | | | | 7,7 | | | | | | |
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| * n * | 5 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 5 | 7 | 7 | 7 | 7 | 7 |
| | | | | | | | | | | | | | | |
| уу zz | 13,0 0,0 | 13,0 50,0 | 13,0 100,0 | 13,0 150,0 | 13,0 200,0 | 13,0 250,0 | 13,0 300,0 | 13,0 350,0 | 15,0 0,0 | 15,0 50,0 | 15,0 100,0 | 15,0 150,0 | 15,0 200,0 | 15,0 250,0 |
| | | | | | | | | | | | | | | |
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| o - ∦ o | | | | | | | | | | | | | | |
| ■ m/s | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 |
| | | | | | 7 | | | | | <u> </u> | | $\overline{}$ | | $\overline{}$ |
| | | SDB | | | | 150 | | 4.0 x | | | | | | |
| | | 132m | | | | t | $\mathbf{H}^{\mathbf{L}}$ | 14.0 1 m | √ y | zz t y m | | | | |



| 074619 | | | | | | | | | | | | 220 | | | 2.50 |
|--------------|----------------|----------------|--------------|--------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------------|-----|----------------------|----------|-------------------|
| | | m | > < t | | CO | DE : | >808 | 30< | | | | V18 | 1 2 | 2A | 00 |
| m F m | 132,0 | 132,0 | 132,0 | 132,0 | 132,0 | 132,0 | 132,0 | 132,0 | 132,0 | 132,0 | | | | | |
| 18,0 | 109,0 | 109,0 | 87,0 | 108,0 | 108,0 | 108,0 | 108,0 | 108,0 | 108,0 | 108,0 | | | | | |
| 20,0 | 108,0 | 108,0 | 75,0 | 107,0 | 107,0 | 107,0 | 107,0 | 107,0 | 107,0 | 107,0 | | | | _ | |
| 22,0 | 107,0 | 107,0 | 66,0 | 103,0 | 107,0 | 107,0 | 107,0 | 107,0 | 107,0 | 107,0 | | | | | |
| 24,0 26,0 | 107,0 106,0 | 107,0 106,0 | 58,0 51,0 | 92,0 83,0 | 106,0 106,0 | 106,0 106,0 | 106,0 106,0 | 106,0 106,0 | 106,0 106,0 | 106,0 106,0 | | | | - | |
| 28,0 | 105,0 | 105,0 | 44,5 | 75,0 | 105,0 | 105,0 | 105,0 | 105,0 | 105,0 | 105,0 | | | | | |
| 30,0 | 103,0 | 104,0 | 39,0 | 67,0 | 96,0 | 104,0 | 105,0 | 105,0 | 105,0 | 105,0 | | | | -+ | |
| 32,0 | 104,0 | 104,0 | 34,0 | 61,0 | 88,0 | 103,0 | 104,0 | 104,0 | 104,0 | 104,0 | | | | | |
| 34,0 | 104,0 | 104,0 | 29,4 | 55,0 | 81,0 | 102,0 | 103,0 | 103,0 | 103,0 | 103,0 | | | | \dashv | |
| 36,0 | 103,0 | 103,0 | 25,4 | 50,0 | 74,0 | 99,0 | 103,0 | 103,0 | 103,0 | 103,0 | | | | | |
| 38,0 | 102,0 | 102,0 | 21,8 | 45,0 | 68,0 | 92,0 | 102,0 | 102,0 | 102,0 | 102,0 | | | | | |
| 40,0 | 100,0 | 100,0 | 18,5 | 41,0 | 63,0 | 85,0 | 98,0 | 100,0 | 100,0 | 100,0 | | | | | |
| 44,0 | 96,0 | 96,0 | 12,6 | 33,0 | 54,0 | 74,0 | 91,0 | 97,0 | 97,0 | 97,0 | | | | | |
| 48,0 | 92,0 | 92,0 | 7,7 | 26,7 | 45,5 | 65,0 | 83,0 | 94,0 | 94,0 | 94,0 | | | | \perp | |
| 52,0 | 89,0 | 89,0 | | 21,2 | 39,0 | 57,0 | 74,0 | 90,0 | 91,0 | 91,0 | | | | | |
| 56,0 | 81,0 | 83,0 | | 16,4 | 33,0 | 49,5 | 66,0 | 83,0 | 86,0 | 87,0 | | | | \perp | |
| 60,0 | 73,0 | 78,0 | | 12,1 | 27,7 | 43,5 | 59,0 | 74,0 | 81,0 | 82,0 | | | | | |
| 64,0 | 65,0 | 73,0 | | 8,4 | 23,1 | 38,0 | 52,0 | 66,0 | 75,0 | 77,0 | | | | _ | |
| 68,0 72,0 | 57,0 | 67,0 | | 5,1 | 19,0 | 33,0 | 46,0 | 58,0 | 70,0 | 72,0 | | | | | |
| 76,0 | 52,0 | 62,0 | | | 15,4 | 28,6 24,6 | 41,5 | 53,0 | 64,0 | 67,0 63,0 | | | | \dashv | |
| 80,0 | 47,0 42,0 | 56,0 51,0 | | | 12,1 9,1 | 21,1 | 36,5 31,5 | 48,0 42,5 | 59,0 53,0 | 58,0 | | | | | |
| 84,0 | 36,5 | 45,0 | | | 6,4 | 17,2 | 26,9 | 37,5 | 47,5 | 54,0 | | | | - | |
| 88,0 | 32,5 | 40,5 | | | 0,4 | 14,4 | 23,5 | 33,5 | 43,0 | 50,0 | | | | | |
| 92,0 | 29,2 | 37,0 | | | | 12,3 | 20,7 | 29,8 | 39,0 | 46,0 | | | | \dashv | |
| 96,0 | 25,8 | 33,0 | | | | 9,9 | 18,0 | 26,3 | 35,0 | 42,5 | | | | | |
| 100,0 | 22,4 | 29,5 | | | | 7,7 | 15,3 | 22,8 | 31,5 | 39,0 | | | | | |
| 104,0 | 19,1 | 25,8 | | | | 5,7 | 12,5 | 19,3 | 27,6 | 35,0 | | | | | |
| 108,0 | 17,1 | 23,4 | | | | | 10,8 | 17,4 | 25,1 | 32,0 | | | | | |
| 112,0 | 15,2 | 21,0 | | | | | 9,2 | 15,5 | 22,6 | 28,7 | | | | | |
| 116,0 | 13,3 | 18,6 | | | | | 7,5 | 13,6 | 20,1 | 25,6 | | | | | |
| 120,0 | 11,4 | 16,3 | | | | | 5,9 | 11,7 | 17,6 | 22,4 | | | | _ | |
| 124,0 | 9,9 | 14,6 | | | | | | 10,2 | 15,8 | 19,4 | | | | | |
| 128,0 | 8,6 | 12,6 | - | 7 | 7 | 7 | 7 | 8,0 | 12,9 | 14,9 7 | | | | \dashv | |
| * n * | 7 | 7 | 5 | / | 7 | / | 7 | 7 | 7 | / | | | | \dashv | |
| уу — | 15,0 | 15,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | | | | + | |
| ZZ | 300,0 | 350,0 | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 | 300,0 | 350,0 | | | | + | |
| | 300,0 | 000,0 | 0,0 | 00,0 | .00,0 | .00,0 | 200,0 | 200,0 | 000,0 | 000,0 | | | | \dashv | |
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| ≻-}0 | | | | | | | | | | | | | | | |
| I m/s | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | | | | | |
| | ,- | ,- | ,- | ,- | ,- | ,- | ,- | ,- | ,- | , - | | 1 | | \dashv | |
| | | SDB | | | 7[2 | | 14 | 4.0 x | | | $\overline{\bigcap}$ | | $\overline{\bigcap}$ | | $\overline{\ \ }$ |
| | | 132m | | | | 150 t | | 14.0 T | □ V | zz t y m | | | | | |



*** 220____ 074619 22.50 CODE >8080< V181 2A00 m > < t132,0 132,0 132,0 132,0 132,0 132,0 132,0 132,0 132,0 132,0 132,0 7,6 9,1 * n * 7 7 5 7 7 7 7 7 7 7 15,0 15,0 18,0 18,0 18,0 18,0 18,0 18,0 18,0 18,0 уу ZZ 300,0 350,0 0,0 50,0 100,0 150,0 200,0 250,0 300,0 350,0 0-40 m/s 12,8 12,8 12,8 12,8 12,8 12,8 12,8 12,8 12,8 12,8 SDB

132m



| 074619 | | | | | | | | | | | | 220 | | 22.50 |
|----------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-----------------|--------------|--------------|--------------|--------------|--------------|--------------|
| N. A. | | m | > < t | | CO | DE : | >808 | 31< | | | | V18 | 1 2E | 300 |
| ₽ M | 138,0 | 138,0 | 138,0 | 138,0 | 138,0 | 138,0 | 138,0 | 138,0 | 138,0 | 138,0 | 138,0 | 138,0 | 138,0 | 138,0 |
| 18,0 | 79,0 | 96,0 | 96,0 | 96,0 | 96,0 | 96,0 | 96,0 | 96,0 | 81,0 | 96,0 | 96,0 | 96,0 | 96,0 | 96,0 |
| 20,0 22,0 | 69,0 60,0 | 96,0 87,0 | 96,0 95,0 | 96,0 95,0 | 96,0 95,0 | 96,0 95,0 | 96,0 95,0 | 96,0 95,0 | 71,0 62,0 | 96,0 92,0 | 96,0 95,0 | 96,0 95,0 | 96,0 95,0 | 96,0 95,0 |
| 24,0 | 52,0 | 77,0 | 94,0 | 94,0 | 94,0 | 94,0 | 94,0 | 94,0 | 54,0 | 82,0 | 95,0 | 95,0 | 95,0 | 95,0 |
| 26,0 | 45,5 | 69,0 | 93,0 | 94,0 | 94,0 | 94,0 | 94,0 | 94,0 | 47,0 | 74,0 | 95,0 | 95,0 | 95,0 | 95,0 |
| 28,0 30,0 | 39,5 34,5 | 62,0 55,0 | 84,0 76,0 | 93,0 93,0 | 93,0 93,0 | 93,0 93,0 | 93,0 93,0 | 93,0 93,0 | 41,0 35,5 | 66,0 60,0 | 92,0 83,0 | 94,0 93,0 | 94,0 93,0 | 94,0 93,0 |
| 32,0 | 29,8 | 49,5 | 69,0 | 89,0 | 92,0 | 92,0 | 92,0 | 92,0 | 31,0 | 54,0 | 76,0 | 91,0 | 93,0 | 93,0 |
| 34,0 | 25,6 | 44,5 | 63,0 | 82,0 | 91,0 | 92,0 | 92,0 | 92,0 | 26,7 | 48,0 | 70,0 | 88,0 | 93,0 | 93,0 |
| 36,0 | 21,8 | 39,5 | 58,0 | 76,0 | 90,0 | 91,0 | 91,0 | 91,0 | 22,8 | 43,0 | 64,0 | 84,0 | 92,0 | 92,0 |
| 38,0 40,0 | 18,3 15,2 | 35,5 31,5 | 53,0 48,0 | 70,0 64,0 | 87,0 81,0 | 91,0 90,0 | 91,0 90,0 | 91,0 90,0 | 19,3 16,1 | 39,0 35,0 | 58,0 53,0 | 78,0 72,0 | 92,0 91,0 | 92,0 91,0 |
| 44,0 | 9,6 | 24,7 | 40,0 | 55,0 | 70,0 | 82,0 | 85,0 | 85,0 | 10,5 | 27,7 | 45,0 | 62,0 | 79,0 | 85,0 |
| 48,0 | | 18,9 | 33,0 | 47,0 | 61,0 | 75,0 | 80,0 | 81,0 | 5,7 | 21,6 | 37,5 | 53,0 | 69,0 | 80,0 |
| 52,0 56.0 | | 13,9 | 26,9 | 40,0 | 53,0 | 66,0 | 75,0 | 77,0 | | 16,4 | 31,5 | 46,0 | 61,0 | 74,0 |
| 56,0 60,0 | | 9,5 5,7 | 21,7 17,2 | 34,0 28,6 | 46,0 40,0 | 58,0 51,0 | 70,0 63,0 | 73,0 67,0 | | 11,9 8,0 | 25,8 21,0 | 39,5 34,0 | 54,0 47,0 | 67,0 60,0 |
| 64,0 | | 3,7 | 13,2 | 24,0 | 34,5 | 45,5 | 56,0 | 62,0 | | 0,0 | 16,8 | 29,1 | 41,5 | 54,0 |
| 68,0 | | | 9,6 | 19,8 | 30,0 | 40,0 | 49,5 | 56,0 | | | 13,0 | 24,7 | 36,5 | 47,5 |
| 72,0 | | | 6,4 | 16,1 | 25,7 | 34,5 | 43,0 | 51,0 | | | 9,6 | 20,7 | 31,5 | 41,5 |
| 76,0 80,0 | | | | 12,7 9,7 | 22,0 18,5 | 30,5 26,4 | 38,5 34,0 | 46,5 41,5 | | | 6,6 | 17,1 13,9 | 27,7 23,8 | 37,0 32,5 |
| 84,0 | | | | 7,0 | 15,4 | 22,3 | 29,4 | 37,0 | | | | 11,0 | 20,0 | 27,9 |
| 88,0 | | | | -,- | 12,3 | 18,2 | 24,8 | 32,0 | | | | 8,3 | 16,2 | 23,5 |
| 92,0 | | | | | 10,0 | 15,5 | 21,7 | 28,5 | | | | 5,9 | 13,6 | 20,4 |
| 96,0 100,0 | | | | | 7,6 | 13,4 | 19,2 | 25,5 | | | | | 11,5 | 18,0 |
| 104,0 | | | | | 5,4 | 11,2 9,1 | 16,7 14,2 | 22,5 19,5 | | | | | 9,5 7,4 | 15,6 13,2 |
| 108,0 | | | | | | 7,0 | 11,7 | 16,4 | | | | | 5,4 | 10,8 |
| 112,0 | | | | | | 5,4 | 9,9 | 14,4 | | | | | | 9,1 |
| 116,0 120,0 | | | | | | | 8,3 | 12,7 | | | | | | 7,5 |
| 124,0 | | | | | | | 6,7 5,1 | 10,9 9,2 | | | | | | 5,9 |
| 128,0 | | | | | | | 0,1 | 7,6 | | | | | | |
| * n * | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 5 | 6 | 6 | 6 | 6 | 6 |
| уу — | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 15,0 | 15,0 | 15,0 | 15,0 | 15,0 | 15,0 |
| ZZ | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 | 300,0 | 350,0 | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 |
| _ | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| o -40 | | | | | | | | | | | | | | |
| m/s | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 |
| | | SDB 138m | | | | 150 t | | 4.0 x 14.0 m | | zz t | | | | |



| | MM | m | n > < t | | СО | DE : | >808 | 31< | | | | V18 | 1 2E | 300 |
|-----------------|-------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|-------------|--------------|---------------|---------------|---------------|---------------|
| m m | 138,0 | 138,0 | 138,0 | 138,0 | 138,0 | 138,0 | 138,0 | 138,0 | 138,0 | 138,0 | 138,0 | 138,0 | 138,0 | 138,0 |
| 132,0 136,0 | | | | | | | | 6,3 5,2 | | | | | | |
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| * n * | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 5 | 6 | 6 | 6 | 6 | 6 |
| уу zz | 13,0 0,0 | 13,0 50,0 | 13,0 100,0 | 13,0 150,0 | 13,0 200,0 | 13,0 250,0 | 13,0 300,0 | 13,0 350,0 | 15,0 0,0 | 15,0 50,0 | 15,0 100,0 | 15,0 150,0 | 15,0 200,0 | 15,0 250,0 |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| 0-40 m/s | 40.0 | 40.0 | 40.0 | 40.0 | 40.0 | 40.0 | 40.0 | 40.0 | 40.0 | 40.0 | 40.0 | 40.0 | 40.0 | 40.0 |
| ⋓ m/s | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 |
| | | SDB | | |][_ | 450 | | 4.0 x | No. | | | | | |
| | | 138m | | | | 150 t | JĽ | 14.0 T | ■ V | zz t y m | | J | | |



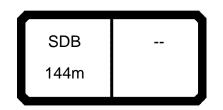
| 014019 | | | | | | | | | | | | 220 | | 22.30 |
|--------------|--------------|--------------|---------|-------|-------|----------|--------------|--------------|---------------------------------------|--------------|-----|-----|-----|-------|
| | MM | m | ı > < t | | CO | DE : | >808 | 31< | | | | V18 | 1 2 | B00 |
| ■ M m | 138,0 | 138,0 | 138,0 | 138,0 | 138,0 | 138,0 | 138,0 | 138,0 | 138,0 | 138,0 | | | | |
| 18,0 | 96,0 | 96,0 | 84,0 | 95,0 | 95,0 | 95,0 | 95,0 | 95,0 | 95,0 | 95,0 | | | | |
| 20,0 | 96,0 | 96,0 | 73,0 | 95,0 | 95,0 | 95,0 | 95,0 | 95,0 | 95,0 | 95,0 | | | | |
| 22,0 | 95,0 | 95,0 | 64,0 | 95,0 | 95,0 | 95,0 | 95,0 | 95,0 | 95,0 | 95,0 | | | | |
| 24,0 | 95,0 | 95,0 | 56,0 | 90,0 | 94,0 | 94,0 | 94,0 | 94,0 | 94,0 | 94,0 | | | | _ |
| 26,0 | 95,0 | 95,0 | 49,0 | 81,0 | 94,0 | 94,0 | 94,0 | 94,0 | 94,0 | 94,0 | | | | |
| 28,0 | 94,0 | 94,0 | 43,0 | 73,0 | 94,0 | 94,0 | 94,0 | 94,0 | 94,0 | 94,0 | | | | |
| 30,0 | 93,0 | 93,0 | 37,5 | 66,0 | 93,0 | 93,0 | 93,0 | 93,0 | 93,0 | 93,0 | | | | |
| 32,0 | 93,0 | 93,0 | 32,5 | 59,0 | 86,0 | 93,0 | 93,0 | 93,0 | 93,0 | 93,0 | | | | |
| 34,0 | 93,0 | 93,0 | 28,3 | 54,0 | 79,0 | 92,0 | 92,0 | 92,0 | 92,0 | 92,0 | | | | |
| 36,0 | 92,0 | 92,0 | 24,3 | 48,5 | 73,0 | 92,0 | 92,0 | 92,0 | 92,0 | 92,0 | | | | _ |
| 38,0 | 92,0 | 92,0 | 20,8 | 44,0 | 67,0 | 90,0 | 91,0 | 91,0 | 91,0 | 91,0 | | | | |
| 40,0 44,0 | 91,0 | 91,0 | 17,5 | 39,5 | 62,0 | 84,0 | 90,0 | 91,0 | 91,0 | 91,0 | | | | |
| 44,0 48,0 | 87,0 | 87,0 | 11,8 | 32,0 | 52,0 | 73,0 | 84,0 | 88,0 | 88,0 | 88,0 | | | | |
| 52,0 | 84,0 | 84,0 | 6,9 | 25,8 | 44,5 | 63,0 | 79,0 | 85,0 | 85,0 | 85,0 | | | | |
| 56,0 | 81,0 | 81,0 | | 20,3 | 38,0 | 55,0 | 73,0 | 82,0 | 82,0 | 82,0 | | | | |
| 60,0 | 77,0 | 77,0 | | 15,5 | 32,0 | 48,5 | 65,0 | 78,0 | 79,0 | 79,0 | | | | |
| 64,0 | 70,0 | 73,0 | | 11,3 | 26,8 | 42,0 | 58,0 | 72,0 | 75,0 | 75,0 | | | | |
| 68,0 | 64,0 | 68,0 | | 7,6 | 22,2 | 37,0 | 51,0 | 65,0 | 71,0 | 71,0 | | | | _ |
| 72,0 | 57,0 | 64,0 | | | 18,2 | 32,0 | 46,0 | 58,0 | 67,0 | 67,0 | | | | |
| 76,0 | 51,0 | 60,0 | | | 14,5 | 27,6 | 40,0 | 52,0 | 63,0 | 63,0 | | | | _ |
| 80,0 | 46,5 | 55,0 | | | 11,3 | 23,7 | 35,5 | 47,0 | 57,0 | 59,0 | | | | |
| 84,0 | 41,5 | 49,5 | | | 8,3 | 20,2 | 31,0 | 42,0 | 52,0 | 55,0 | | | | |
| 88,0 | 36,5 | 45,0 | | | 5,6 | 17,0 | 26,8 | 37,5 | 47,0 | 51,0 | | | | |
| 92,0 | 32,0 | 40,0 | | | | 13,8 | 22,3 | 32,5 | 42,0 | 47,5 | | | | |
| 96,0 | 28,3 25,3 | 36,0 32,5 | | | | 11,4 | 19,4 | 28,8 | 38,0 | 44,0 | | | | |
| 100,0 | | | | | | 9,0 | 17,0 | 25,8 | 34,5 | 40,5 | | | | |
| 104,0 | 22,3 19,3 | 29,0 25,5 | | | | 6,7 | 14,7 12,4 | 22,7 19,7 | 31,0 27,5 | 37,5 34,0 | | | | |
| 108,0 | 16,3 | 22,0 | | | | | 10,1 | 16,6 | 23,9 | 30,5 | | | | |
| 112,0 | 14,3 | 19,8 | | | | | 8,4 | 14,6 | 21,5 | 27,8 | | | | |
| 116,0 | 12,6 | 17,8 | | | | | 6,8 | 12,9 | 19,4 | 24,9 | | | | |
| 120,0 | 10,8 | 15,8 | | | | | 5,2 | 11,1 | 17,2 | 22,1 | | | | |
| 124,0 | 9,1 | 13,8 | | | | | 0,2 | 9,3 | 15,1 | 19,3 | | | | |
| 128,0 | 7,5 | 12,1 | | | | | | 7,8 | 13,3 | 16,6 | | | | |
| * n * | 6 | 6 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | | | | |
| | | | | | | | | | | | | | | |
| уу — | 15,0 | 15,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | | | | |
| ZZ | 300,0 | 350,0 | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 | 300,0 | 350,0 | | | | |
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| 0-10 | | | | | | | | | | | | | | |
| m/s | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | | | | |
| w 111/3 | 12,0 | 12,0 | 12,0 | 12,0 | 12,0 | 12,0 | 12,0 | 12,0 | 12,0 | 12,0 | | | | |
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| ſ | 1 | 65- | | | 7 | <u> </u> | | 4.0 x | Res. | AD. | | 1 | ſ |) |
| 1 | | SDB | | | | | | +.∪ X | Ay I | | | | | |
| | | 138m | | | | 150 | | 14.0 📘 | b | | | | | |
| | | 130111 | | | | t | | m \frown | ▼ ∨ | ym zzt ym | | | | |
| L | JE | | | | | • | 46 | ••• | , , , , , , , , , , , , , , , , , , , | | i L | | E. | J |



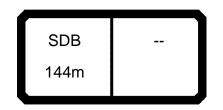
| 074619 | · | | | | | | | | | | | 220 | | 22.50 |
|----------------|---------------|---------------|---------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-----|-----|---------------|
| | MM | m | ı > < t | , | CO | DE : | >808 | 31< | ı | , | | V18 | 1 2 | B00 |
| ₽ m | 138,0 | 138,0 | 138,0 | 138,0 | 138,0 | 138,0 | 138,0 | 138,0 | 138,0 | 138,0 | | | | |
| 132,0 136,0 | 6,1 5,1 | 10,6 7,5 | | | | | | 6,4 | 11,7 6,7 | 14,1 7,8 | | | | |
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| * n * | 6 | 6 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | | | | |
| уу zz | 15,0 300,0 | 15,0 350,0 | 18,0 | 18,0 50,0 | 18,0 100,0 | 18,0 150,0 | 18,0 200,0 | 18,0 250,0 | 18,0 300,0 | 18,0 350,0 | | | | |
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| o -40 | | | | | | | | | | | | | | + |
| m/s | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | | | | |
| | | | | | 7 | Д | ור | 1.0 × | Fig. | | $\overline{}$ | | | $\overline{}$ |
| | | SDB 138m | | | | 150 | | 4.0 x | | | | | | |
| l | | 130111 | | | JĽ | t | JL | m \frown | У | y m | l | J | l | J |



| 0/4618 | , | | | | | | | | | | | 220 | | 22.50 |
|----------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|--------------|---------------|
| | | m | ı > < t | | CO | DE : | >808 | 32< | | | , | V18 | 1 20 | 000 |
| m m | 144,0 | 144,0 | 144,0 | 144,0 | 144,0 | 144,0 | 144,0 | 144,0 | 144,0 | 144,0 | 144,0 | 144,0 | 144,0 | 144,0 |
| 18,0 | | 82,0 | 82,0 | 82,0 | 82,0 | 82,0 | 82,0 | 82,0 | 77,0 | 83,0 | 83,0 | 83,0 | 83,0 | 83,0 |
| 20,0 22,0 | 65,0 57,0 | 82,0 81,0 | 67,0 58,0 | 82,0 82,0 | 82,0 82,0 | 82,0 82,0 | 82,0 82,0 | 82,0 82,0 |
| 24,0 | 49,0 | 74,0 | 80,0 | 80,0 | 80,0 | 80,0 | 80,0 | 80,0 | 51,0 | 79,0 | 81,0 | 81,0 | 81,0 | 81,0 |
| 26,0 | 42,5 | 66,0 | 80,0 | 80,0 | 80,0 | 80,0 | 80,0 | 80,0 | 44,0 | 70,0 | 81,0 | 81,0 | 81,0 | 81,0 |
| 28,0 | 37,0 | 59,0 | 80,0 | 80,0 | 80,0 | 80,0 | 80,0 | 80,0 | 38,0 | 63,0 | 81,0 | 81,0 | 81,0 | 81,0 |
| 30,0 | 31,5 | 52,0 | 73,0 | 79,0 | 79,0 | 79,0 | 79,0 | 79,0 | 33,0 | 56,0 | 80,0 | 80,0 | 80,0 | 80,0 |
| 32,0 34,0 | 27,1 23,0 | 46,5 41,5 | 66,0 60,0 | 77,0 75,0 | 78,0 78,0 | 78,0 78,0 | 78,0 78,0 | 78,0 78,0 | 28,2 24,0 | 51,0 45,5 | 73,0 67,0 | 79,0 78,0 | 79,0 79,0 | 79,0 79,0 |
| 36,0 | 19,2 | 37,0 | 55,0 | 72,0 | 77,0 | 77,0 | 77,0 | 77,0 | 20,3 | 40,5 | 61,0 | 77,0 | 78,0 | 78,0 |
| 38,0 | 15,8 | 33,0 | 49,5 | 67,0 | 77,0 | 77,0 | 77,0 | 77,0 | 16,8 | 36,0 | 55,0 | 75,0 | 78,0 | 78,0 |
| 40,0 | 12,7 | 29,0 | 45,0 | 61,0 | 77,0 | 77,0 | 77,0 | 77,0 | 13,7 | 32,0 | 51,0 | 69,0 | 78,0 | 78,0 |
| 44,0 | 7,3 | 22,2 | 37,0 | 52,0 | 67,0 | 72,0 | 74,0 | 74,0 | 8,1 | 25,2 | 42,0 | 59,0 | 73,0 | 74,0 |
| 48,0 52,0 | | 16,5 11,5 | 30,5 24,4 | 44,0 37,5 | 58,0 50,0 | 67,0 62,0 | 71,0 68,0 | 71,0 68,0 | | 19,2 14,1 | 35,0 28,8 | 51,0 43,5 | 66,0 58,0 | 71,0 67,0 |
| 56,0 | | 7,2 | 19,3 | 31,5 | 43,5 | 62,0 56,0 | 66,0 | 66,0 | | 9,6 | 23,4 | 43,5 37,0 | 56,0 51,0 | 64,0 |
| 60,0 | | - ,_ | 14,8 | 26,2 | 37,5 | 49,0 | 60,0 | 62,0 | | 5,7 | 18,7 | 31,5 | 44,5 | 57,0 |
| 64,0 | | | 10,9 | 21,6 | 32,5 | 43,0 | 54,0 | 57,0 | | | 14,5 | 26,7 | 39,0 | 51,0 |
| 68,0 | | | 7,3 | 17,5 | 27,6 | 38,0 | 47,0 | 53,0 | | | 10,7 | 22,3 | 34,0 | 45,5 |
| 72,0 76,0 | | | | 13,8 | 22,8 | 32,0 | 40,5 | 48,0 | | | 7,4 | 18,4 | 29,2 | 39,0 |
| 80,0 | | | | 10,5 7,5 | 18,9 16,1 | 27,5 24,0 | 35,5 31,5 | 43,5 39,0 | | | | 14,8 11,6 | 24,8 21,5 | 34,0 30,0 |
| 84,0 | | | | 7,5 | 13,2 | 20,5 | 27,4 | 34,5 | | | | 8,7 | 18,2 | 26,2 |
| 88,0 | | | | | 10,3 | 17,0 | 23,2 | 30,0 | | | | 6,1 | 14,9 | 22,2 |
| 92,0 | | | | | 7,7 | 13,5 | 19,1 | 25,7 | | | | | 11,6 | 18,2 |
| 96,0 | | | | | 5,4 | 11,3 | 16,6 | 22,7 | | | | | 9,5 | 15,7 |
| 100,0 104,0 | | | | | | 9,3 7,4 | 14,4 12,3 | 20,2 17,7 | | | | | 7,6 5,4 | 13,6 11,4 |
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| 124,0 128,0 | | | | | | | | 7,5 | | | | | | |
| * n * | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5,9 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | | | | | | | | | - | - | | | - | |
| уу | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 15,0 | 15,0 | 15,0 | 15,0 | 15,0 | 15,0 |
| ZZ | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 | 300,0 | 350,0 | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 |
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| 0-40 | | | | | | | | | | | | | | |
| M | 12.0 | 12.0 | 12.0 | 120 | 120 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 120 | 120 | 12.0 |
| ⋓ m/s | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 |
| | | | | | | | | | | | | $\overline{}$ | | $\overline{}$ |
| | | SDB | | | | ^ | 14 | 4.0 x | (V) | | | | | |
| | | | | | | 150 | | 14.0 | ₽¥ | | | | | |
| | 11 | 144m | | | | † | | 📥 | Ⅱ ← | zz t y m | | | | |
| | JL | | | | | ι | JL | m | У | y 111 | | J | L | J |



| 0/4619 | | | | | 00 | | 000 | 20 | | | | 220 | | 22.50 |
|----------------|-------|-------|---------|-------|-------|-------|-------|-----------------|------------|-------------|---------------------------------------|-------|---------------|-------------|
| | | m | 1 > < t | | CO | DE : | >808 | 32< | | | · · · · · · · · · · · · · · · · · · · | V18 | 1 20 | <i>5</i> 00 |
| ₽ m | 144,0 | 144,0 | 144,0 | 144,0 | 144,0 | 144,0 | 144,0 | 144,0 | 144,0 | 144,0 | 144,0 | 144,0 | 144,0 | 144,0 |
| 132,0 136,0 | | | | | | | | | | | | | | |
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| * n * | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| уу | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 13,0 | 15,0 | 15,0 | 15,0 | 15,0 | 15,0 | 15,0 |
| zz _ | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 | 300,0 | 350,0 | 0,0 | 50,0 | 100,0 | 150,0 | 200,0 | 250,0 |
| | | | | | | | | | | | | | | |
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| o -40 | | | | | | | | | | | | | | |
| u m/s | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 | 12,8 |
| | | | | | 7 | | 1 | | | Øb. | | | $\overline{}$ | <u> </u> |
| | | SDB | | | | 150 | | 4.0 x | | | | | | |
| | | 144m | | | | t | 114 | m 14.0 I | √ y | zz t y m | | | | |



| March Marc | <u> </u> | | | | | | | | | | | | 220 | | 4 | 22.50 |
|--|----------------|-------|-------|-------|-------|-------|-------|-------|--------|----------|-------|---|---------------|---|----|---------------|
| 18.0 83.0 83.0 83.0 83.0 83.0 83.0 83.0 8 | | MM | m | > < t | | CO | DE : | >808 | 32< | | 1 | | V18 | 1 | 20 | 000 |
| 200 82.0 82.0 82.0 89.0 82.0 82.0 82.0 82.0 82.0 82.0 82.0 82 | m m | 144,0 | 144,0 | 144,0 | 144,0 | 144,0 | 144,0 | 144,0 | 144,0 | 144,0 | 144,0 | | | | | |
| 220 82.0 82.0 61.0 82.0 61.0 82.0 82.0 82.0 82.0 82.0 82.0 82.0 82 | | | | | | | 83,0 | | | | | | | | | |
| 240 81.0 81.0 81.0 53.0 82.0 82.0 82.0 82.0 82.0 82.0 82.0 82 | | | | | | | | | | | | | | | | |
| 28.0 81.0 81.0 40.0 77.0 81.0 81.0 81.0 81.0 81.0 81.0 81.0 81 | | | | | | | | | | | | | | | | |
| 28,0 81,0 81,0 81,0 40,0 70,0 81,0 81,0 81,0 81,0 81,0 81,0 81,0 8 | | | | | | | | | | | | | | | | |
| 320 | I | | | | | | | | | | | | | | | |
| 34.0 79.0 79.0 29.9 66.0 76.0 79.0 79.0 79.0 79.0 79.0 79.0 79.0 36.0 78.0 78.0 78.0 78.0 78.0 18.3 41.0 64.0 70.0 79.0 78.0 78.0 78.0 78.0 78.0 78.0 78.0 78 | | | | | | | | | | | | | | | | |
| 34.0 79.0 79.0 25.7 51.0 76.0 79.0 79.0 79.0 79.0 79.0 79.0 38.0 78.0 78.0 21.8 46.0 70.0 79.0 79.0 79.0 79.0 79.0 79.0 38.0 78.0 78.0 18.3 41.0 64.0 78.0 78.0 78.0 78.0 78.0 78.0 78.0 44.0 78.0 78.0 15.1 37.0 59.0 78.0 78.0 78.0 78.0 78.0 78.0 78.0 78 | I | | I | | | | | | | | | | | | | |
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| 38.0 78.0 78.0 18.3 41.0 64.0 78.0 78.0 78.0 78.0 78.0 78.0 78.0 44.0 78.0 78.0 15.1 37.0 59.0 78.0 78.0 78.0 78.0 78.0 78.0 44.0 74.0 74.0 9.4 29.6 50.0 70.0 74.0 76.0 76.0 76.0 76.0 48.0 73.0 73.0 23.3 42.0 61.0 71.0 75.0 75.0 75.0 75.0 55.0 69.0 69.0 69.0 13.2 29.5 46.0 62.0 71.0 71.0 71.0 71.0 60.0 64.0 65.0 9.1 24.4 39.5 55.0 67.0 68.0 68.0 64.0 64.0 59.0 61.0 5.4 19.9 34.5 49.0 61.0 64.0 64.0 66.0 12.3 25.3 38.0 49.0 57.0 57.0 75.0 76.0 76.0 48.5 54.0 58.0 15.9 29.6 43.5 55.0 67.0 68.0 68.0 64.0 59.0 61.0 5.4 19.9 34.5 49.0 61.0 64.0 59.0 61.0 5.4 19.9 34.5 49.0 61.0 64.0 59.0 61.0 64.0 68.0 64.0 12.3 25.3 38.0 49.0 57.0 57.0 57.0 76.0 43.5 50.0 69.0 12.3 25.3 38.0 49.0 57.0 57.0 57.0 57.0 57.0 57.0 57.0 57 | | | | | | | | | | | | | | | | |
| 44,0 78,0 78,0 15,1 37,0 59,0 78,0 78,0 78,0 78,0 76,0 76,0 76,0 74,0 74,0 74,0 9,4 29,6 50,0 70,0 74,0 76,0 76,0 76,0 76,0 76,0 76,0 73,0 73,0 73,0 73,0 73,0 13,0 13,2 23,3 42,0 61,0 71,0 71,0 75,0 75,0 75,0 75,0 66,0 69,0 69,0 69,0 13,2 29,5 46,0 62,0 71,0 71,0 71,0 60,0 64,0 65,0 9,1 24,4 39,5 55,0 67,0 68,0 68,0 68,0 64,0 59,0 61,0 5,4 19,9 34,5 49,0 61,0 64,0 64,0 64,0 68,0 58,0 15,9 29,6 43,5 55,5 61,0 61,0 61,0 72,0 48,5 54,0 12,3 25,3 38,0 49,0 57,0 57,0 75,0 76,0 76,0 43,5 50,0 69,0 9,0 21,4 33,0 44,0 53,0 53,0 53,0 80,0 39,0 45,5 6,1 17,9 29,1 39,5 48,5 59,0 6,1 17,9 29,1 39,5 48,5 59,0 84,0 30,0 37,5 114,7 22,1 30,5 40,0 43,0 96,0 22,6 29,9 6,8 14,7 23,1 32,0 37,0 100,0 20,1 26,9 100,0 20,1 26,9 100,0 20,1 26,9 104,0 17,5 23,8 10,4 12,8 12,8 12,8 12,8 12,8 12,8 12,8 12,8 | | | | | | | | | | | | | | | | |
| 48.0 73.0 73.0 73.0 23.3 42.0 61.0 71.0 75.0 75.0 75.0 50.0 50.0 69.0 71.0 71.0 17.9 35.5 53.0 67.0 73.0 73.0 73.0 73.0 56.0 69.0 69.0 13.2 29.5 46.0 62.0 71.0 71.0 71.0 60.0 64.0 65.0 9.1 24.4 39.5 55.0 67.0 68.0 68.0 68.0 64.0 59.0 10.5 54.0 19.9 34.5 55.0 67.0 64.0 64.0 64.0 66.0 54.0 19.9 34.5 55.0 67.0 61.0 64.0 64.0 64.0 66.0 72.0 48.5 54.0 12.3 25.3 38.0 49.0 57.0 57.0 77.0 77.0 76.0 43.5 50.0 9.0 21.4 33.0 44.0 53.0 53.0 80.0 39.0 45.5 61.1 17.9 29.1 39.5 48.5 50.0 84.0 34.5 41.5 88.0 30.0 37.5 11.8 21.1 30.5 40.0 43.0 92.0 25.5 33.0 9.2 17.2 26.1 35.5 40.0 43.5 50.0 99.0 21.4 33.0 44.0 46.5 88.0 30.0 37.0 37.0 190.0 20.1 26.9 16.8 14.7 23.1 32.0 37.0 1104.0 17.5 23.8 10.6 18.0 25.6 31.0 108.0 15.0 20.8 11.7 9.0 12.5 17.7 6.5 12.8 19.2 24.9 112.0 12.5 17.7 6.5 12.8 19.2 24.9 112.0 12.5 17.7 6.5 12.8 19.2 24.9 112.0 12.5 17.7 6.5 12.8 19.2 24.9 112.0 12.5 15.0 15.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18 | 40,0 | | I | | 37,0 | 59,0 | | | 78,0 | | | | | | | |
| S20 | 44,0 | 74,0 | 74,0 | 9,4 | 29,6 | 50,0 | 70,0 | 74,0 | 76,0 | 76,0 | 76,0 | | | | | |
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