LIEBHERR

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SD, SLD, SL2D I--I ==> Wind 12.8m/s

Livro de tabelas de carga

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PERIGO

Perigo de acidente!

Decisivo para o serviço de grua são os regulamentos descritos no manual de instruções.

▶ Dar atenção às indicações e informações descritas no manual de instruções!

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II. TABELAS DE CARGA

1. Explicações

1.1 Os valores de carga nas tabelas de carga estão indicadas em toneladas [t].

1.2 O alcance é a distância do centro de gravidade horizontal da carga desde o eixo de rotação do chassi superior, medido no solo. Assim a flexão da lança está considerada sob carga nominal.

1.3 Outras posições da lança do que aquelas que estão indicadas nas tabelas de carga não são permitidos.

1.4 Também sem carga, a lança somente pode ser movimentada nas zonas dos valores de carga indicados, de contrário existe perigo de queda. Em serviço normal isto está assegurado através da protecção contra sobrecarga. Na comutação para "Montagem" (com pulsador à chave para montagem) a lança não pode ser basculada para baixo para além da zona do alcance da lança.

1.5 Nas cargas especificadas estão contidas os pesos dos meios de retenção, de recepção e de fixação da carga. O peso possível da carga a ser levantado é assim inferior do que o peso em cima mencionado.

1.6 Em alguns tipos de serviço será indicado no símbolo de tipos de serviço informações e restrições adicionais. *Consulte „Descrição de limitações nos modos de serviço“ a página 60.*

PERIGO

Perigo de acidente!

▶ As restrições e as condições para o serviço de grua devem ser cumpridas obrigatoriamente!

1.7 Em modos de serviço com carros do lastro ou lastro em suspensão tem de ser determinado com planeador de trabalhos LICCON o peso do lastro Derrick necessário para a carga a ser levantada.

2. Serviço de grua „grua estabilizada“

2.1 As longarinas de apoio dobráveis para fora do apoio hidráulico têm de ser deslocadas para fora exactamente para a medida indicada na tabela da capacidade de carga a ser utilizada (para os dois lados uniformemente).

2.2 As placas de apoio e sapatas têm de ser montadas nos cilindros de apoio como está descrito no manual de serviço da grua.

2.3 Os dois suportes dos rastos têm de ser levantados do chão.

2.4 Com a ajuda do Terminal Bluetooth™ (BTT) deverá nivelar a grua horizontalmente. A posição horizontal da grua também tem de ser controlada regularmente durante o serviço de grua e sendo necessário corrigir.

3. Deslocamento

Consulte manual de serviço da grua.

4. Existe perigo de queda ou perigo de sobrecarga nos componentes portadores de carga:

4.1 quando as cargas indicadas nas tabelas de carga, comprimentos da lança e alcances da lança são ultrapassadas.

4.2 quando através de um comando incorrecto dos movimentos da grua a carga suspensa começa em movimentos pendulares.

4.3 quando é executada tracção oblíqua. Muito perigoso é a tracção oblíqua transversal para o sentido da lança. É proibida a tracção oblíqua !

4.4 quando não é respeitada suficiente distância para fossas, caves e taludes.

4.5 quando em estado de serviço "grua estabilizada":

4.5.1 a grua não está apoiada nem soldada correctamente sobre os 4 apoios hidráulicos.

4.5.2 as longarinas de apoio dobráveis para fora não se encontram expandidas para as medidas determinadas nas respectivas tabelas da capacidade de carga.

4.5.3 as placas de apoio e sapatas não estão montadas nos cilindros de apoio como está descrito no manual de serviço da grua.

4.5.4 os 4 apoios hidráulicos não estão fundamentados correspondentemente às condições do terreno sobre uma grande área com materiais estáveis.

4.6 quando em estado de serviço "grua sobre suporte dos rastos":

4.6.1 o subsolo não está em condições, de sustentar com seguridade o peso de serviço da grua máx. mais o peso da carga.

4.6.2 o subsolo não é plano e tem uma inclinação. *Consulte „15.2 Inclinação lateral máxima permitida da grua durante o trabalho com as tabelas de carga“ a página 66.*

5. Utilização da grua (cargas colectivas)

Gruas móveis e gruas com rastos Liebherr são construídas para o serviço de montagem (classe da cargas colectivas = "leve" = Q1 respectivamente L1). Se as gruas forem aplicadas em serviço de magnete, de balde de maxilas, ou serviço de transbordo (classe de cargas coletivas = "médio" ou pesado), então têm de ser observados vários pontos. Consulte o Capítulo 8.01 "Inspecção periódica de gruas" no manual de serviço da grua.

Observação

- ▶ Caso a grua for carregada através de cargas colectivas elevadas acima da média, por exemplo através de trabalhos em serviço de magnete, balde de maxilas, ou de transbordo, então os intervalos de inspecção têm de ser correspondentemente encurtados.

NOTA

Desgaste e fendas antecipadas nos componentes estruturais!

Quando a grua não é aplicada em serviço de montagem mas sim em serviço de magnete, balde de maxilas, ou de transbordo, então deverá ter em conta com um desgaste antecipado nos componentes do grupo propulsor e/ou com fendas nas partes da estrutura de aço de sustentação.

- ▶ Nós aconselhamos por isso urgentemente, em serviço de magnete, balde de maxilas, ou de transbordo reduzir as cargas a 50% em comparação com as indicações na correspondente tabela da capacidade de carga.

NOTA

Elevado desgaste do cabo e danificações do cabo!

Para que seja mantido um desgaste mínimo possível nos cabos de elevação em serviço de magnete, balde de maxilas, ou de transbordo, é aconselhado a utilização de um comprimento de cabo especial!

Se não for utilizado nenhum comprimento de cabo especial, então as camadas de cabo não utilizadas poderão se soltar. Com elevadas tracções do cabo, o cabo nas camadas de cabo não utilizadas pode ser puxado e causar danificações no cabo!

- ▶ Utilizar um comprimento de cabo especial em serviço de magnete, balde de maxilas, ou de transbordo, para que na posição inferior do moitão do gancho estar desenrolado o comprimento do cabo total (até a ca. de 3-5 enrolamentos restantes)!

6. Dispositivo de segurança contra sobrecarga LICCON e interruptor fim de curso

O dispositivo de segurança contra sobrecarga LICCON electrónico desliga o movimento de elevação, basculação da lança ao exceder o momento de carga permitido. É possível um aliviamento através dum movimento em sentido oposto. O dispositivo de segurança contra sobrecarga LICCON tem de ser controlado antes de cada aplicação à sua operacionalidade.

6.1 O dispositivo de segurança contra sobrecarga LICCON deve-se ajustar ao estado actual do equipamento da grua através das teclas de função ou introduzindo o código curto correspondente de 4 algarismos.

6.2 O dispositivo de segurança contra sobrecarga LICCON é um dispositivo de segurança e não pode ser utilizado como dispositivo de desligamento em serviço normal. O gruísta tem de se certificar sobre o peso da carga antes de cada jogo de carga. A existência do dispositivo de segurança contra sobrecarga LICCON não desresponsabiliza o gruísta da sua responsabilidade.

6.3 Na unidade de comando e indicação do dispositivo de segurança contra sobrecarga LICCON serão indicados entre outros o alcance, comprimento da lança, a altura dos rolos, a carga e o grau do aproveitamento da grua. Através disto é possível uma vista geral constante através da zona de trabalho e o aproveitamento da grua.

6.4 Os interruptores fim de curso de elevação montados nas pontas da lança (lança em treliça, lança auxiliar) têm por missão impedir um choque do moitão do gancho com o cabeçal da lança. Eles têm de ser controlados à sua operacionalidade antes de qualquer trabalho com a grua.

6.5 O interruptor fim de curso de cames da caixa nos cabrestantes do cabo vigia a existência de 3 enrolamentos de segurança sobre o tambor para cabos. Ao alcançar a última camada de cabo tem de se certificar adicionalmente através dum controlo visual a existência dos restantes 3 enrolamentos. Se os mecanismos de elevação foram rodados excessivamente em sentido de elevação, assim como depois da substituição do cabo de elevação, então o correspondente interruptor fim de curso tem de ser de novo ajustado antes de colocar de novo em serviço.

6.6 O condutor da grua deve assegurar-se do funcionamento do controlador de cargas LICCON antes de cada utilização. Por danos na grua e possíveis danos que sejam originados porque não funciona ou por estar fora de funcionamento o controlador de cargas LICCON, o fabricante da grua não assume qualquer responsabilidade.

7. Cabrestantes do cabo (mecanismos de elevação)

7.1 Tracções máximas do cabo dos cabrestantes do cabo

Cabo de elevação	Tracção máxima do cabo	Utilização
Tipo 1 (D=28 mm)	180 KN (18,1 t)	Cabrestante 1 Cabrestante 2 Cabrestante 6
Tipo 2 (D=25 mm)	125 KN (12,6 t)	Cabrestante 6
Tipo 3 (D=28 mm)	160 KN (16,1 t)	Cabrestante 6

Estas tracções do cabo não podem de maneira alguma ser ultrapassada. Tem de ser seleccionado correspondentemente o número de ramais de cabos de elevação mínimo (colocação do cabo) dependente do peso da carga a ser levantada (consulte a tabela "colocação do cabo de elevação" no Capítulo II).

7.2 Para impedir cabo frouxo na montagem dos equipamentos adicionais (por ex.: polia na extremidade do mastro) tem de ser vigiada por uma pessoa a guia do cabo nos cabrestantes!

8. Colocação do cabo de elevação

8.1 O cabo de elevação tem de ser colocado dependente da tracção do cabo máxima do mecanismo de elevação e do peso da carga a ser levantada entre o cabeçal da lança e moitão do gancho.

8.2 Em colocação múltipla do cabo de elevação reduz-se o grau de aproveitamento do moitão do gancho através da fricção das polias e da flexão do cabo. Com isso podem ser puxadas com uma tracção do cabo de por exemplo 180 KN com 10 colocações em vez de 1800 KN (181 t) somente 1681 KN (169 t).

8.3 As cargas máximas, dependente do número de ramais de cabos de elevação, podem se recolhidas da tabela "Colocação do cabo de elevação" no Capítulo II deste manual.

8.3.1 Serviço de grua com 1 cabrestante do cabo de elevação em serviço individual.

Exemplo: cálculo do número de colocações do cabo para o levantamento de uma carga de 280 t.

A colocação do cabo necessária com 1 cabrestante do cabo de elevação é de acordo com a tabela "colocação do cabo de elevação" no Capítulo II para o diâmetro do cabo 28 mm (tipo1):

18 ramais do cabo (287,0 t)

8.3.2 Serviço de grua com 2 cabrestantes do cabo de elevação em serviço paralelo.

Em serviço de grua com 2 cabrestantes do cabo de elevação em serviço paralelo será determinada a colocação necessária em 3 passos.

Passo 1: a carga será dividida por 2, já que a carga será acolhida em partes iguais pelo cabrestante do cabo de elevação 1 e cabrestante do cabo de elevação 2.

Passo 2: a colocação do cabo necessária para 1 cabrestante do cabo de elevação será determinada.

Passo 3: a colocação do cabo determinada para 1 cabrestante do cabo de elevação será aplicada em ambos cabrestantes do cabo de elevação.

Exemplo: cálculo do número de colocações do cabo necessário para o levantamento de uma carga de 280 t com 2 cabrestantes do cabo de elevação em serviço paralelo.

Passo 1: 280 t / 2 cabrestantes do cabo de elevação = 140 t.

Passo 2: a colocação do cabo necessária com 1 cabrestante do cabo de elevação é de acordo com a tabela "colocação do cabo de elevação" no Capítulo II para o diâmetro do cabo 28 mm (tipo1):

9 ramais do cabo (153,2 t)

Passo 3: a colocação do cabo necessária com 2 cabrestantes do cabo de elevação em serviço paralelo é assim de:

2 x 9 ramais do cabo = 18 ramais do cabo (2 x 153,2 t = 306,4 t)

Indicação

- Antes de ser aplicada a colocação do cabo determinada em serviço de grua, tem de ser controlado se as colocações do cabo de elevação mínimo e pesos do moitão do gancho mínimo são necessários. *Consulte „10. Colocações do cabo de elevação mínimas e pesos do moitão do gancho mínimo“ a página 27.*

8.4 O número de colocações do cabo de elevação na unidade de comando e indicação da limitação de momento de carga tem de corresponder ao número de colocações do cabo de elevação na grua.

8.5 Tracções máximas do cabo para países que utilizam factor de segurança de cabos 5 segundo ASME B30.5 (Canada, USA e Taiwan)

Indicação

Em países nos quais as Normas nacionais ASME B30.5 são aplicadas (Canada, USA, e Taiwan) está prescrito um factor de segurança de cabo 5 para cabo de elevação livre ao torção. As cargas resultadas das tracções do cabo na Tabela "colocação do cabo de elevação" no Capítulo II deste Manual foram determinadas de acordo com DIN EN 13000 com factor de segurança de cabo 4,5.

No DIN EN 13000 será ao contrário com ASME B30.5 também considerado o grau de aproveitamento do sistema de accionamento dos cabos. Por esta razão em países nos quais as Normas nacionais ASME B30.5 têm aplicação (Canada, USA, e Taiwan) numa colocação do cabo até a 13 vezes do qual resultará as cargas das tracções do cabo serão aplicadas as tabelas seguintes. A partir de uma colocação do cabo de 13 vezes é o factor de segurança do cabo 4,5 de acordo com DIN EN 13000 mais segura do que o factor de segurança do cabo 5 de acordo com ASME B30.5!

Respeitando as determinações normalizadas no Capítulo 5.3.2.1.1 (d) do ASME B30.5 podem ser aplicadas também as tracções do cabo de acordo com DIN EN 13000.

8.5.1 Cargas máximas dependente da colocação do cabo utilizada

Cabo de elevação tipo 1: D=28,0 mm

Colocação do cabo	Carga máxima (DIN EN 13000) [t]	Carga máxima (ASME B30.5) (Canadá, USA, Taiwan) [t]
1	18,1	16,5
2	35,9	33,0
3	53,4	49,5
4	70,7	66,1
5	87,7	82,6
6	104,5	99,1
7	121,0	115,6
8	137,2	132,1
9	153,2	148,6
10	169,0	165,1
11	184,5	181,7
12	199,9	198,2
13	214,9	214,7

Cabo de elevação tipo 2: D=25,0 mm

Colocação do cabo	Carga máxima (DIN EN 13000) [t]	Carga máxima (ASME B30.5) (Canadá, USA, Taiwan) [t]
1	12,6	11,5
2	24,9	22,9
3	37,1	34,4
4	49,1	45,9
5	60,9	57,3
6	72,5	68,8
7	84,0	80,3
8	95,3	91,7
9	106,4	103,2
10	117,4	114,7
11	128,2	126,1
12	138,8	137,6
13	149,3	149,1

Cabo de elevação tipo 3: D=28,0 mm

Colocação do cabo	Carga máxima (DIN EN 13000) [t]	Carga máxima (ASME B30.5) (Canadá, USA, Taiwan) [t]
1	16,1	14,7
2	31,9	29,4
3	47,5	44,0
4	62,8	58,7
5	78,0	73,4
6	92,8	88,1
7	107,5	102,8
8	122,0	117,4
9	136,2	132,1
10	150,2	146,8
11	164,0	161,5
12	177,6	176,1
13	191,0	190,8

9. Moitões de gancho e ganchos de carga

9.1 Peso do moitão do gancho mínimo necessário

AVISO

Queda de componentes estruturais e moitão do gancho!

Se o peso do moitão do gancho for escolhido muito baixo, o cabo de elevação puxa aos solavancos o moitão do gancho para cima a partir duma determinada altura de elevação entre o cabeçal da lança e cabrestante. Como consequência podem ser danificados o cabeçal da lança e o moitão do gancho. Componentes estruturais danificados e o cabo de elevação entre o cabeçal da lança e cabrestante podem cair.
Se ao desenrolar o cabrestante se formar cabo frouxo entre o cabrestante e o cabeçal da lança, o moitão do gancho pode cair de súbito para baixo.
Pessoas podem ser gravemente feridas ou serem mortas!

- ▶ Calcular o peso do moitão do gancho mínimo necessário antes de levantar a carga!
- ▶ Escolher o peso do moitão do gancho dependente da calculação!

Quando o peso do moitão do gancho é muito baixo:

- ▶ Escolher moitão do gancho pesado ou aumentar o peso do moitão do gancho com meios de recepção de carga, meios de recepção de carga, pesos suplementares ou jogos de modificação!

NOTA

Danificações do cabo por razões do peso do moitão do gancho ser muito baixo!

Se o moitão do gancho for operado com uma colocação do cabo superior, do que é necessária para a carga no respectivo comprimento da lança, então aumenta-se o peso do moitão do gancho mínimo necessário.
Quando o peso do moitão do gancho é muito baixo para tensionar suficientemente o cabo de elevação, podem aparecer ao baixar e levantar o moitão do gancho em consequência de formação de cabos frouxos, problemas de enrolamento nos cabrestantes. As consequências serão danificações no cabos.

Quando para o modo de serviço não é necessário nenhuma colocação do cabo de elevação mínima dependente do sistema:

- ▶ Colocação do moitão do gancho dependente da tracção do cabo máxima e do peso da carga mínima a ser levantada!

Quando o peso do moitão do gancho é muito baixo:

- ▶ Escolher moitão do gancho pesado ou aumentar o peso do moitão do gancho com meios de recepção de carga, meios de recepção de carga, pesos suplementares ou jogos de modificação!

Observação

Recomendação para escolher o peso do moitão do gancho!

Quando através de um aumento do peso adicional do moitão do gancho não é ultrapassada a capacidade de carga máxima na respectiva configuração da lança:

▶ Aumentar adicionalmente o peso do moitão do gancho mínimo necessário para no mínimo 10 por cento!

Quando um aumento do peso adicional do moitão do gancho não é possível por razões da capacidade de carga máxima na respectiva configuração da lança:

▶ Descer o moitão do gancho somente com muito cuidado!

Observação

Dar atenção ao peso do moitão do gancho permitido para levantar e depositar o sistema da lança!

Quando através do aumento do próprio peso do moitão do gancho for ultrapassado o peso do moitão do gancho permitido para levantar e depositar o sistema da lança, então o sistema da lança não pode ser levantado e depositado com este peso do moitão do gancho.

▶ Dar atenção ao peso do moitão do gancho máximo permitido nas tabelas de levantamento e depósito para levantamento e depósito!

Quando o peso do moitão do gancho permitido para levantamento e depósito for ultrapassado:

▶ Desmontar os pesos suplementares para o levantamento e depósito do sistema da lança!

9.1.1 Calcular o peso do moitão do gancho mínimo necessário

G = **L** x **M** x **N** x **F**

Tab. 1 Fórmula para calculação do peso do moitão do gancho mínimo necessário

Abreviatura	Designação	Unidade
G	Peso do moitão do gancho mínimo necessário	kg
L	Comprimento da lança total	m
M	Peso do cabo	kg/m
N	Colocação do cabo	-
F	Factor	-

Tab. 2 Explicação do variável para calculação do peso do moitão do gancho mínimo necessário

9.1.2 Determinar o peso do cabo para o diâmetro do cabo

Diâmetro do cabo	Peso do cabo 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
38 mm	7,21 kg/m
40 mm	7,99 kg/m
52 mm	13,50 kg/m

Tab. 3 Diâmetro do cabo e peso do cabo

9.1.3 Determinar o factor para colocação do cabo

Colocação do cabo 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

Tab. 4 Colocação do cabo e factor

9.1.4 Exemplo de calculação para 1 cabrestante do cabo de elevação em serviço individual

Calculação do peso do moitão do gancho necessários para o serviço de grua com 1 cabrestante do cabo de elevação em serviço individual com moitão do gancho simples:

Configuração da grua:

- Comprimento da lança principal: 36,0 m
- Comprimento da lança suplementar: 30,0 m
- Diâmetro do cabo: 28 mm
- Colocação do cabo: 11 ramais do cabo

Variável para calculação:

L = Comprimento da lança total = 66,0 m
M = Peso do cabo para diâmetro do cabo 28 mm = 3,94 kg/m
N = Colocação do cabo = 11
F = Factor para 11 ramais do cabo = 1,57

Calculação:

G = **L** x **M** x **N** x **F**
G = 66,0 m x 3,94 kg/m x 11 x 1,57
G = 4490,90 kg

O peso do moitão do gancho mínimo necessário tem de ser de 4491 kg e ser adicionalmente aumentado para no mínimo 10 por cento (449,1 kg) para 4940,1 kg. Através do aumento do peso adicional do moitão do gancho a capacidade de carga máxima não pode ser ultrapassada na respectiva configuração da lança:

9.1.5 Exemplo de calculação para 2 cabrestantes do cabo de elevação em serviço paralelo

Calculação do peso do moitão do gancho necessário para o serviço de grua com 2 cabrestantes do cabo de elevação em serviço paralelo com moitão do gancho duplo:

Configuração da grua:

- Comprimento da lança principal: 48,0 m
- Comprimento da lança suplementar: -
- Diâmetro do cabo: 28 mm
- Colocação do cabo: 2 x 19 ramais do cabo

Variável para calculação:

L = Comprimento da lança total = 48,0 m
M = Peso do cabo para diâmetro do cabo 28 mm = 3,94 kg/m
N = Colocação do cabo = (2 x 19)
F = Factor para 19 ramais do cabo = 1,80

Calculação:

G = **L** x **M** x **N** x **F**
G = 48,0 m x 3,94 kg/m x (2 x 19) x 1,80
G = 12935,81 kg

O peso do moitão do gancho mínimo necessário tem de ser de 12936 kg e ser adicionalmente aumentado para no mínimo 10 por cento (1293,6 kg) para 14229,6 kg. Através do aumento do peso adicional do moitão do gancho a capacidade de carga máxima não pode ser ultrapassada na respectiva configuração da lança.

9.2 Comprimento máximo possível de toda a lança

O comprimento da lança pode ser limitado em relação ao número de cabos e ao peso do moitão do gancho.

O comprimento máximo possível de toda a lança com um determinado número de cabos e um determinado peso do moitão do gancho está descrito na lista de moitões de gancho e ganchos de carga.

Observação

- A base para a calculação do valor especificado na lista de moitões de gancho e ganchos de carga são os dados específicos da grua. Os dados específicos da grua são para o gancho de carga e moitões de gancho prescritos e têm de condizer com a configuração da grua.

9.3 Ganchos de carga e moitões de gancho para o serviço de grua com 1 cabrestante do cabo de elevação em serviço individual com cabo do tipo 1 (D=28 mm)

Dados específicas da grua		
Diâmetro do cabo:	28,0	[mm]
Peso do cabo:	0,00394	[t/m]
Fragmentação da lança:	6	[m]
Comprimento da lança min.:	24	[m]
Comprimento da lança máx.:	192	[m]
Quantidade de cabrestantes do cabo de elevação:	1	
Comprimento do cabo de elevação:	1050	[m]
Derrick até dispositivo de desvio do cabo de elevação:	31,0	[m]

9.3.1 Ganchos de carga 16 E (0 polias do cabo / Carga 16,0 t)

Número ramal	**Comprimento da lança total máxima possível [m] com peso do moitão do gancho [t]**					
	1,1 t sem pesos adicio-nais					
1	192					

9.3.2 Moitão do gancho 50 EM (1 polia do cabo / Carga 50,0 t)

Número ramal	**Comprimento da lança total máxima possível [m] com peso do moitão do gancho [t]**					
	1,0 t sem pesos adicio-nais	**2,0 t com 2 pesos adicio-nais**	**3,0 t com 4 pesos adicio-nais**			
3	60	120	186			
2	90	186	192			
1	192	192	192			

9.3.3 Moitão do gancho 125 DM (3 polias do cabo / Carga 121,0 t)

Número ramal	Comprimento da lança total máxima possível [m] com peso do moitão do gancho [t]					
	1,5 t sem pesos adicio-nais	2,5 t com 2 pesos adicio-nais	3,5 t com 4 pesos adicio-nais	4,5 t com 6 pesos adicio-nais	5,5 t com 8 pesos adicio-nais	
7	36	60	84	108	120	
6	42	72	102	132	138	
5	48	84	120	156	162	
4	66	114	156	192	192	
3	90	150	192	192	192	
2	138	192	192	192	192	
1	192	192	192	192	192	

9.3.4 Moitão do gancho 200 DM (5 polias do cabo / Carga 184,5 t)

Número ramal	Comprimento da lança total máxima possível [m] com peso do moitão do gancho [t]					
	2,0 t sem pesos adicio-nais	3,0 t com 2 pesos adicio-nais	4,0 t com 4 pesos adicio-nais	5,0 t com 6 pesos adicio-nais	6,0 t com 8 pesos adicio-nais	7,0 t com 10 pesos adicio-nais
11	24	42	54	72	78	78
10	30	48	60	78	84	84
9	36	54	72	90	96	96
8	42	60	84	102	108	108
7	48	72	96	120	120	120
6	54	84	114	138	138	138
5	66	102	138	162	162	162
4	90	132	180	192	192	192
3	120	186	192	192	192	192
2	186	192	192	192	192	192
1	192	192	192	192	192	192

9.3.5 Moitão do gancho duplo 400 - 200 DMZ (5 polias do cabo / Carga 184,5 t)

Número ramal	Comprimento da lança total máxima possível [m] com peso do moitão do gancho [t]					
	5,0 t sem pesos adicio-nais	6,0 t com 2 pesos adicio-nais	7,0 t com 4 pesos adicio-nais			
11	72	78	78			
10	78	84	84			
9	90	96	96			
8	102	108	108			
7	120	120	120			
6	138	138	138			
5	162	162	162			
4	192	192	192			
3	192	192	192			
2	192	192	192			
1	192	192	192			

9.3.6 Moitão do gancho duplo 600 - 300 DMZ (9 polias do cabo / Carga 300 t)

Número ramal	Comprimento da lança total máxima possível [m] com peso do moitão do gancho [t]					
	8,5 t sem pesos adicio-nais					
19	48					
18	48					
17	54					
16	54					
15	60					
14	60					
13	66					
12	72					
11	78					
10	84					
9	96					
8	108					
7	120					
6	138					
5	162					
4	192					
3	192					
2	192					
1	192					

9.4 Moitões de gancho para o serviço de grua com 2 cabrestantes do cabo de elevação em serviço paralelo com cabo do tipo 1 (D=28 mm)

Dados específicas da grua		
Diâmetro do cabo:	28,0	[mm]
Peso do cabo:	0,00394	[t/m]
Fragmentação da lança:	6	[m]
Comprimento da lança min.:	24	[m]
Comprimento da lança máx.:	192	[m]
Quantidade de cabrestantes do cabo de elevação:	2	
Comprimento do cabo de elevação:	1050	[m]
Derrick até dispositivo de desvio do cabo de elevação:	31,0	[m]

9.4.1 Moitão do gancho duplo 400 - 200 DMZ (2 x 5 polias do cabo / Carga 369 t)

Número ramal	**Comprimento da lança total máxima possível [m] com peso do moitão do gancho [t]**					
	6,0 t sem pesos adicio-nais	**7,0 t com 2 pesos adicio-nais**	**8,0 t com 4 pesos adicio-nais**	**9,0 t com 6 pesos adicio-nais**	**10,0 t com 8 pesos adicio-nais**	**11,0 t com 10 pesos adicio-nais**
2 x 11	42	48	54	66	72	78
2 x 10	48	54	60	72	78	84
2 x 9	54	60	72	78	90	96
2 x 8	60	72	84	90	102	108
2 x 7	72	84	96	108	120	120
2 x 6	84	102	114	132	138	138

9.4.2 Moitão do gancho duplo 600 - 300 DMZ (2 x 9 polias do cabo / Carga 600 t)

Número ramal	Comprimento da lança total máxima possível [m] com peso do moitão do gancho [t]					
	11,0 t sem pesos adicio-nais	12,0 t com 2 pesos adicio-nais	13,0 t com 4 pesos adicio-nais	14,0 t com 6 pesos adicio-nais	15,0 t com 8 pesos adicio-nais	16,0 t com 10 pesos adicio-nais
2 x 19	36	42	48	48	48	54 (a)
2 x 18	42	42	48	48	48	54 (a)
2 x 17	42	48	54	54	54	60 (a)
2 x 16	48	54	54	54	54	60 (a)
2 x 15	54	60	60	60	60	66 (a)
2 x 14	60	60	60	60	60	66 (a)
2 x 13	66	66	66	66	66	72 (a)
2 x 12	72	72	72	72	72	72
2 x 11	78	78	78	78	78	78
2 x 10	84	84	84	84	84	84
2 x 9	96	96	96	96	96	96
2 x 8	108	108	108	108	108	108
2 x 7	120	120	120	120	120	120
2 x 6	138	138	138	138	138	138

(a) = Em valores marcados com (a) (comprimento da lança total) o moitão do gancho não pode por razões do comprimento do cabo de elevação ser descido até ao solo!

10. Colocações do cabo de elevação mínimas e pesos do moitão do gancho mínimo

Para serviço de grua seguro são necessárias por diversas razões as colocações do cabo de elevação mínimas e pesos do moitão do gancho mínimo.

Existem 4 diferentes critérios de limitação para o cálculo da colocação do cabo de elevação mínima. Cada um dos critérios conduz a uma colocação do cabo de elevação mínima.

Critérios de limitação são:

1.) Tabela de colocação do cabo de elevação

($n_{min\ [Tabela\ de\ colocação]}$)

2.) Razões estáticas ($n_{min\ [estática]}$), ($G_{min\ [estática]}$)

3.) Pesagem da carga segura ($n_{min\ [Pesagem\ da\ carga]}$)

4.) Comando de serviço paralelo operacional ($n_{min\ [Serviço\ paralelo]}$)

1.) Colocação do cabo de elevação mínima por razão da tracção do cabo máxima permitida ($n_{min\ [Tabela\ de\ colocação]}$)

Colocação do cabo de elevação mínima dependente da tracção do cabo máxima do mecanismo de elevação que é necessária para levantamento da carga. *Consulte a tabela "Colocação do cabo de elevação" no Capítulo II deste manual.*

2.) Colocações do cabo de elevação mínimas e pesos do moitão do gancho mínimo por razões estáticas ($n_{min\ [estática]}$), ($G_{min\ [estática]}$)

Colocações do cabo de elevação mínimas e pesos do moitão do gancho mínimo que em determinados modos de serviço são necessários para impedir, que a grua se movimente para trás incontroladamente para posições da lança a pique e tombe. *Consulte „10.1 Colocações do cabo de elevação mínimas e pesos do moitão do gancho mínimo, que por razões de estática são necessários em determinados modos de serviço“ a página 28.*

3.) Colocações do cabo de elevação mínimas para uma pesagem da carga segura do dispositivo de segurança contra sobrecarga LICCON ($n_{min\ [Pesagem\ da\ carga]}$)

Colocações do cabo de elevação mínimas que geralmente são necessárias em todos os modos de serviço para uma pesagem da carga segura do dispositivo de segurança contra sobrecarga LICCON. *Consulte „10.2 Colocações do cabo de elevação mínimas necessárias para uma pesagem da carga segura do dispositivo de segurança contra sobrecarga LICCON“ a página 35.*

4.) Colocações do cabo de elevação mínimas para comando do serviço paralelo operacional ($n_{min\ [Serviço\ paralelo]}$)

Colocações do cabo de elevação mínimas as quais garantem, um impedimento de uma posição inclinada não permitida do moitão do gancho em serviço paralelo. *Consulte „10.3 Colocações do cabo de elevação mínimas necessárias em serviço paralelo“ a página 38.*

Antes do serviço de grua têm de ser determinadas as colocações do cabo de elevação mínimas de todos os 4 critérios de limitação. A maior colocação do cabo de elevação mínima determinada é decisiva e tem de ser utilizada para o levantamento da carga!

10.1 Colocações do cabo de elevação mínimas e pesos do moitão do gancho mínimo, que por razões de estática são necessários em determinados modos de serviço

10.1.1 Colocação do cabo de elevação mínima, serviço SW; SDW; SDWV

TAB 181 00 027-00

AVISO

Perigo de queda!

Quando a colocação do cabo de elevação mínima e pesos do moitão do gancho mínimo não forem respeitadas, a lança pode-se em posição da lança a pique movimentar-se descontroladamente para trás. A grua pode tombar!

- As colocações do cabo de elevação mínimas e pesos do moitão do gancho mínimo apresentadas na tabela têm de ser mantidas obrigatoriamente dependentemente do ângulo da lança principal.

AVISO

Perigo de queda!

Quando a polia na extremidade do mastro está montada na ponta em treliça basculável W-12 e o cabo de elevação não está colocado mínimo 2 vezes na polia na extremidade do mastro, então a lança em posição da lança a pique pode-se movimentar para trás incontroladamente. A grua pode tombar!

- Na ponta em treliça basculável W-12 com polia na extremidade do mastro montada tem que o cabo de elevação estar colocado na polia no mínimo 2 vezes.

Indicação

- Como ângulo da lança principal será designada a inclinação da lança principal para a horizontal.
- As informações descritas na tabela valem também por princípio para o serviço com polia na extremidade do mastro.
- As colocações do cabo de elevação mínimas valem para o serviço com 1 cabrestante do cabo de elevação e para o serviço com 2 cabrestantes do cabo de elevação.

  Exemplo para 6 colocações do cabo de elevação mínimas:

  1 cabrestante do cabo de elevação: 1 x 6 colocações do cabo
  2 cabrestantes do cabo de elevação: 2 x 3 colocações do cabo

Em serviço com as combinações da lança para (**1**) o moitão do gancho tem de agir com o peso mínimo (**3**) e com a colocação do cabo de elevação mínima (**2**) nas respectivas zonas de ângulo da lança principal.

(1) Lança		**(2) Colocação do cabo de elevação mínimo**	**(3) Peso mínimo do moitão do gancho [t]**	
S [m]	**W [m]**		**Ângulo da lança principal > 70°**	**Ângulo da lança principal < 70°**
S-36	W-12 (b)	8	3,0	-
	W-18 (b)	4	2,0	-
S-42	W-12 (b)	8	3,0	-
	W-18 (b)	4	2,0	-
S-48	W-12 (b)	10	4,0	-
	W-18 (b)	4	4,0	-
S-54	W-12 (b)	10	7,0	4,0
	W-18 (b)	4	4,0	-
S-60	W-12 (b)	12	8,0	6,0
	W-18 (b)	4	5,0	-
	W -24	4	2,0	-
S-66	W-12 (b)	14	9,0	7,0
	W-18 (b)	6	6,0	-
	W -24	4	3,5	-
	W -30	4	3,5	-
S-72	W-12 (b)	16	11,0	9,0
	W-18 (b)	6	7,0	4,0
	W -24	4	5,0	-
	W -30	4	5,0	-
S-78	W-12 (b)	14	13,0	10,0
	W-18 (b)	8	8,0	5,0
	W -24	6	5,0	-
	W -30	6	5,0	-
	W -36	4	3,0	-

(1) Lança		(2) Colocação do cabo de elevação mínimo	(3) Peso mínimo do moitão do gancho [t]	
S [m]	W [m]		Ângulo da lança principal > 70°	Ângulo da lança principal < 70°
S-84	W-12 (b)	12	16,0	12,0
	W-18 (b)	10	10,0	6,0
	W -24	6	7,0	4,0
	W -30	6	7,0	-
	W -36	4	3,0	-
S-90	W-18 (b)	12	11,0	8,0
	W -24	6	10,0	4,0
	W -30	6	9,0	-
	W -36	4	5,0	-
	W -42	4	4,0	-
	W -48	4	4,0	-
S-96	W -24	8	11,0	6,0
	W -30	6	11,0	-
	W -36	4	7,0	-
	W -42	4	4,0	-
	W -48	4	4,0	-
S-102	W -24	6	15,0	6,0
	W -30	6	13,0	5,0
	W -36	6	8,0	-
	W -42	4	5,0	-
	W -48	4	4,0	-
	W -54	4	4,0	-

(b) = As pontas em treliça basculáveis W-12 e W-18 marcadas com (b) vale somente para o serviço SDWV.

10.1.2 Colocação do cabo de elevação mínima, serviço SLF; SL3F
TAB 181 00 047-00

AVISO

Perigo de queda!

Quando a colocação do cabo de elevação mínima e pesos do moitão do gancho mínimo não forem respeitadas, a lança pode-se em posição da lança a pique movimentar-se incontroladamente para trás. A grua pode tombar!

- As colocações do cabo de elevação mínimas e pesos do moitão do gancho mínimo apresentadas na tabela têm de ser mantidas obrigatoriamente dependentemente do ângulo da lança principal.
- O moitão do gancho pode ser somente ser baixado abaixo da zona de ângulo determinado, isso significa para a posição mais plana por baixo desta zona.

Em serviço com as combinações da lança para (**1**) tem que agir na posição mais a pique na zona de ângulo da lança principal (**4**) o moitão do gancho com o peso mínimo (**2**) e com a colocação do cabo de elevação mínima (**3**).

(1) Lança		**(2) Peso mínimo do moitão do gancho**	**(3) Colocação do cabo de elevação mínimo**	**(4) Ângulo lança principal**	
SL [m]	**F [m]**	**[t]**		**de [°]**	**até [°]**
SL-54 - SL3-108	F-12 / 11°	2,5	7	75	87
	F-12 / 11°	3,0	6	75	87
	F-12 / 11°	3,5	5	75	87
	F-12 / 11°	4,0	4	75	87
	F-12 / 16°	1,5	3	75	87

10.1.3 Colocação do cabo de elevação mínima, serviço SL10DFB; SL10DFB2

TAB 181 00 191-00

AVISO

Perigo de queda!

Quando a colocação do cabo de elevação mínima e pesos do moitão do gancho mínimo não forem respeitadas, a lança pode-se em posição da lança a pique movimentar-se descontroladamente para trás. A grua pode tombar!

- As colocações do cabo de elevação mínimas e pesos do moitão do gancho mínimos descritas na tabela têm de ser obrigatoriamente cumpridas.

Em serviço com as combinações da lança para (**1**) o moitão do gancho tem de agir com o peso mínimo (**2**) e com a colocação do cabo de elevação mínima (**3**).

(1) Lança		**(2) Peso mínimo do moitão do gancho**	**(3) Colocação do cabo de elevação mínimo**
SL [m]	**F [m]**	**[t]**	
SL10-102 - SL10-153	F-12 / 11°	6,0	5
	F-12 / 16°	3,0	4

10.1.4 Colocação do cabo de elevação mínima, serviço SL2DFB; SL4DFB; SL2DFBW; SL4DFBW

TAB 181 00 192-00

AVISO

Perigo de queda!

Quando a colocação do cabo de elevação mínima e pesos do moitão do gancho mínimo não forem respeitadas, a lança pode-se em posição da lança a pique movimentar-se descontroladamente para trás. A grua pode tombar!

- As colocações do cabo de elevação mínimas e pesos do moitão do gancho mínimos descritas na tabela têm de ser obrigatoriamente cumpridas.

Em serviço com as combinações da lança para (**1**) o moitão do gancho tem de agir com o peso mínimo (**2**) e com a colocação do cabo de elevação mínima (**3**).

(1) Lança		**(2) Peso mínimo do moitão do gancho**	**(3) Colocação do cabo de elevação mínimo**
SL [m]	**F [m]**	**[t]**	
SL-72 - SL-138	F-12 / 11°	6,0	5
	F-12 / 16°	3,0	4
	F-18 / 13°	2,0	4
	F-18 / 18°	2,0	4

10.1.5 Colocação do cabo de elevação mínima, serviço SL5DFB; SL5DFBW

TAB 181 00 193-00

AVISO

Perigo de queda!

Quando a colocação do cabo de elevação mínima e pesos do moitão do gancho mínimo não forem respeitadas, a lança pode-se em posição da lança a pique movimentar-se descontroladamente para trás. A grua pode tombar!

- As colocações do cabo de elevação mínimas e pesos do moitão do gancho mínimos descritas na tabela têm de ser obrigatoriamente cumpridas.

Em serviço com as combinações da lança para (**1**) o moitão do gancho tem de agir com o peso mínimo (**2**) e com a colocação do cabo de elevação mínima (**3**).

(1) Lança		**(2) Peso mínimo do moitão do gancho**	**(3) Colocação do cabo de elevação mínimo**
SL [m]	**F [m]**	**[t]**	
SL5-114 - SL5-147	F-12 / 11°	6,0	5
	F-18 / 13°	2,0	4

10.2 Colocações do cabo de elevação mínimas necessárias para uma pesagem da carga segura do dispositivo de segurança contra sobrecarga LICCON

Em pequenas colocações do cabo de elevação, especialmente em posições da lança a pique, o sinal medido da união de medição de tracção para a pesagem da carga está tão reduzido na ancoragem, que o dispositivo de segurança contra sobrecarga LICCON não pode pesar com suficiente precisão a carga. As colocações do cabo de elevação mínimas determinadas nas tabelas asseguram, que a grua especialmente nas posições da lança a pique como 60° para a horizontal não será sobrecarregada despercebidamente.

AVISO

Perigo de sobrecarga nos componentes estruturais portadores de carga!

Se a colocação do cabo de elevação mínima não for mantida, a pesagem da carga do dispositivo de segurança contra sobrecarga LICCON pode ser muito pequena. Se o desligamento do dispositivo de segurança contra sobrecarga LICCON, por consequência da indicação da carga muito pequena, ocorrer demasiadamente tarde, então os componentes que suportam a carga serão sobrecarregados. Componentes podem partir e causar acidentes mortais!

- ▶ As colocações do cabo de elevação mínimas descritas nas tabelas seguintes têm de ser obrigatoriamente cumpridas.
- ▶ Decisivo é a colocação do cabo de elevação mínima da tabela para a lança, na qual a carga está suspensa.

10.2.1 Colocações do cabo de elevação mínimas na lança principal em modos de serviço sem Derrick, carga na lança principal

Modo de serviço	Comprimento da lança principal [m]	Colocação do cabo elevação mínima	
		Serviço individual	Serviço paralelo
S	24	7	2 x 8
	30	7	2 x 8
	36	6	2 x 6
	42	5	2 x 6
	48	5	2 x 6
	54	5	2 x 6
	60	4	2 x 6
	66	4	-
	72	4	-
	78	3	-
	84	3	-
	90	3	-
	96	3	-
	102	3	-
	108	3	-

10.2.2 Colocações do cabo de elevação mínimas na lança principal em modos de serviço com Derrick, carga na lança principal

Modo de serviço	Comprimento da lança principal [m]	Colocação do cabo elevação mínima	
		Serviço individual	Serviço paralelo
SD	36	13	2 x 14
	42	14	2 x 14
	48	12	2 x 12
	54	10	2 x 10
	60	8	2 x 10
	66	7	2 x 8
	72	6	2 x 8
	78	6	2 x 6
	84	5	2 x 6
	90	5	2 x 6
	96	4	2 x 6
	102	4	-
	108	4	-
	114	4	-
	120	3	-
	126	3	-
	132	3	-
	138	3	-
	144	3	-

10.2.3 Colocações do cabo de elevação mínimas na ponta em treliça basculável (WV), carga na ponta em treliça basculável (WV)

Modo de serviço	Comprimento ponta basculante [m]	Colocação do cabo elevação mínima	
		Serviço individual	Serviço paralelo
WV	12	5	2 x 6
	18	5	2 x 6
	24	4	2 x 6
	30	4	-
	36	3	-
	42	3	-
	48	3	-
	54	2	-
	60	2	-
	66	2	-
	72	2	-
	78	2	-
	84	2	-
	90	2	-
	96	3	-

10.2.4 Colocações do cabo de elevação mínimas na ponta em treliça basculável (W), carga na ponta em treliça basculável (W)

Modo de serviço	Comprimento ponta basculante [m]	Colocação do cabo elevação mínima	
		Serviço individual	Serviço paralelo
W	24	5	2 x 6
	30	5	2 x 6
	36	4	2 x 6
	42	4	-
	48	3	-
	54	3	-
	60	3	-
	66	3	-
	72	3	-
	78	2	-
	84	2	-
	90	2	-
	96	2	-

10.3 Colocações do cabo de elevação mínimas necessárias em serviço paralelo

Com uma colocação do cabo de elevação mínima de 2 x 6 ramais do cabo será assegurado, que em serviço paralelo do cabrestante 1 e cabrestante 2 será evitada uma posição inclinada não permitida do moitão do gancho e o decurso paralelo do cabrestante 1 e cabrestante 2 está garantido.

AVISO

Perigo de sobrecarga nos componentes estruturais portadores de carga!

Se a colocação do cabo de elevação mínima não for respeitada, pode por razões da posição inclinada do moitão do gancho serem sobrecarregados os componentes portadores de carga. Componentes podem partir e causar acidentes mortais!

- ▶ Em serviço paralelo do cabrestante 1 e cabrestante 2 tem de estar no mínimo colocados 2 x 6 ramais do cabo!

11. Procedimento para determinar a colocação do cabo de elevação e moitão do gancho necessário

Antes do levantamento de uma carga tem de ser determinada a colocação do cabo de elevação e moitão do gancho para isso necessários. Seguidamente será apresentada progressivamente, como tem de ser determinada a colocação do cabo de elevação e o moitão do gancho em serviço individual (serviço de grua com 1 cabrestante do cabo de elevação) e serviço paralelo (serviço de grua com 2 cabrestantes do cabo de elevação).

11.1 Passo 1: Determinar a carga

As cargas indicadas nas tabelas de carga contêm os pesos seguintes:

- Peso da carga a ser levantada
- Peso dos meios de recepção de carga (moitões do gancho e ganchos de carga)
- Peso do meio de fixação

Antes de determinar a colocação do cabo de elevação tem de ser determinada a carga (Peso da carga + Peso do meio de recepção de carga + Peso do meio de fixação).

Averiguar os pesos do meio de recepção de carga no Capítulo "Moitão do gancho e ganchos de carga".

▶ Determinar o peso do moitão do gancho necessário para a carga a ser levantada.

▶ Determinar o peso dos meios de fixação.

Resultado:

- Peso da carga

11.2 Passo 2: Determinar a colocação do cabo de elevação mínima dependente da tracção do cabo máxima permitida ($n_{min\ [Tabela\ de\ colocação]}$)

As colocações do cabo de elevação dependente da máxima tracção do cabo do cabrestante do cabo de elevação será determinado da "Tabela de colocação" no Capítulo II deste manual.

▶ Determinar a colocação do cabo de elevação $n_{min\ [Tabela\ de\ colocação]}$ para a carga em serviço de grua com 1 cabrestante do cabo de elevação em serviço individual.

-ou-

Determinar a colocação do cabo de elevação $n_{min\ [Tabela\ de\ colocação]}$ da carga para o serviço de grua com 2 cabrestantes do cabo de elevação em serviço paralelo.

Resultado:

- Colocação do cabo necessária $n_{min\ [Tabela\ de\ colocação]}$

Indicação

Em serviço de grua com 2 cabrestantes do cabo de elevação em serviço paralelo será determinada a colocação necessária em 3 passos.

▶ A carga será dividida por 2, já que a carga será acolhida em partes iguais pelo cabrestante do cabo de elevação 1 e cabrestante do cabo de elevação 2.

▶ A colocação do cabo necessária para 1 cabrestante do cabo de elevação será determinado.

▶ A colocação do cabo determinada para 1 cabrestante do cabo de elevação será aplicada nos dois cabrestantes do cabo de elevação.

11.3 Passo 3: Determinar a colocação do cabo de elevação mínima e os pesos dos moitões do gancho mínimo por razões de estática ($n_{min\ [estática]}$), ($G_{min\ [estática]}$)

Determinar as colocações do cabo de elevação e os pesos dos moitões do gancho necessários por razões de estática, os quais são necessários em determinados modos de serviço, em Capítulo "Colocações do cabo de elevação mínimas e pesos do moitão do gancho mínimo, que por razões de estática são necessários em determinados modos de serviço".

▶ Determinar a colocação do cabo de elevação mínima $n_{min\ [estática]}$ e peso dos moitões do gancho mínimo $G_{min\ [estática]}$, os quais por razões de estática são necessários em determinados modos de serviço.

Resultado:
- Colocação do cabo necessária $n_{min\ [estática]}$
- Moitão do gancho necessário $G_{min\ [estática]}$

11.4 Passo 4: Determinar a colocação do cabo de elevação mínima para uma pesagem da carga segura do dispositivo de segurança contra sobrecarga LICCON ($n_{min\ [pesagem\ da\ carga]}$)

Determinar as colocações do cabo de elevação necessárias para uma pesagem da carga segura do dispositivo de segurança contra sobrecarga LICCON no Capítulo "Colocações do cabo de elevação mínimas necessárias para uma pesagem da carga segura do dispositivo de segurança contra sobrecarga LICCON ".

▶ Colocação do cabo de elevação mínima $n_{min\ [pesagem\ da\ carga]}$, a qual é necessária para uma pesagem da carga segura do dispositivo de segurança contra sobrecarga LICCON.

Resultado:
- Colocação do cabo necessária $n_{min\ [pesagem\ da\ carga]}$

11.5 Passo 5: Determinar a colocação do cabo de elevação mínima para um comando do serviço paralelo operacional ($n_{min\ [serviço\ paralelo]}$)

Determinar as colocações do cabo de elevação necessárias para um comando do serviço paralelo operacional, as quais são somente necessárias em serviço paralelo do cabrestante 1 e cabrestante 2, no Capítulo "Colocações do cabo de elevação mínimas necessárias em serviço paralelo".

▶ Determinar a colocação do cabo de elevação mínima $n_{min\ [serviço\ paralelo]}$, a qual é necessária para uma pesagem da carga segura do dispositivo de segurança contra sobrecarga LICCON.

Resultado:
- Colocação do cabo necessária $n_{min\ [serviço\ paralelo]}$

11.6 Passo 6: Determinar a colocação do cabo de elevação mínima (n_{min}) e o peso dos moitões do gancho mínimo (G_{min}), que tem de ser utilizada para levantamento da carga

Depois de determinar as colocações do cabo de elevação mínimas e pesos do moitão do gancho mínimo para os critérios de limitação ($n_{min\ [Tabela\ de\ colocação]}$, $n_{min\ [estática]}$, $G_{min\ [estática]}$, $n_{min\ [pesagem\ da\ carga]}$, $n_{min\ [serviço\ paralelo]}$) tem de ser determinada a maior colocação do cabo de elevação mínima e peso do moitão do gancho.

▶ Determinar a maior colocação do cabo de elevação mínima n_{min} das colocações do cabo de elevação mínimas determinadas ($n_{min\ [Tabela\ de\ colocação]}$, $n_{min\ [estática]}$, $n_{min\ [pesagem\ da\ carga]}$, $n_{min\ [serviço\ paralelo]}$) e peso dos moitões do gancho mínimo G_{min} para ($G_{min\ [estática]}$).

Resultado:
- Colocações do cabo de elevação mínimas necessárias n_{min} e peso dos moitões do gancho mínimo necessário G_{min}. Estes têm de ser utilizados para levantamento da carga.

12. Reduções de carga

12.1 Redução da capacidade de carga com polia na extremidade do mastro montada

12.1.1 As cargas indicadas nas tabelas de carga para o serviço de grua na lança principal em treliça respectivamente na ponta em treliça são válidas sem polia na extremidade do mastro montada.

12.1.2 Quando a polia na extremidade do mastro nos modos de serviço sem polia na extremidade do mastro fica mesmo assim montada no cabeçal da lança, reduz-se a carga possível nestes modos de serviço ao:

- o peso da polia na extremidade do mastro
- o peso do cabo de elevação colocado na polia na extremidade do mastro
- o peso dos meios de recepção de carga utilizados na polia na extremidade do mastro
- o peso dos meios de recepção e de fixação de carga utilizados no cabeçal da lança

12.1.3 Para o serviço de grua com a carga máxima de 36 t na polia na extremidade do mastro não existem nenhumas tabelas de carga. São válidas as tabelas de carga dos modos de serviço com lança principal e lança suplementar todavia reduzem-se as cargas para:

- o peso da polia na extremidade do mastro
- o peso do cabo de elevação colocado na polia na extremidade do mastro
- o peso dos meios de recepção e de fixação de carga utilizados na polia na extremidade do mastro
- o peso dos meios de recepção de carga utilizados no cabeçal da lança

12.2 Redução da capacidade de carga com barras de ancoragem pousadas

12.2.1 As cargas indicadas nas tabelas de carga valem sem barras de ancoragem pousadas.

12.2.2 Quando estão as barras de ancoragem pousadas em cima reduzem-se os valores de carga possíveis.

A redução da capacidade de carga está dependente do peso e centro de gravidade das barras de ancoragem e do ângulo da lança. Quanto maior for o peso das barras de ancoragem, mais próximo se encontra o centro de gravidade das barras de ancoragem no cabeçal de polias e quanto mais inclinada estiver a lança principal para a horizontal, maior é a redução da capacidade de carga.

12.2.3 A redução da capacidade de carga calcula-se simplificada do comprimento da lança e do peso por metro das barras de ancoragem:

Redução da capacidade de carga = 0,5 x comprimento da lança x peso por metro das barras de ancoragem

12.2.4 Exemplo para o serviço da lança principal com barras de ancoragem pousadas do cavalete WA II:

Comprimento da lança:	90 m
Peso por metro das barras de ancoragem:	0,120 t/m
Redução da capacidade de carga (ca.): 0,5 x 90 m x 0,120 t/m	5,4 t

12.3 Redução da capacidade de carga em montagem de um conjunto de polias adicional

12.3.1 Existem 2 conjuntos de polias substituíveis, os quais podem ser montados individualmente ou conjuntamente no cabeçal SW. O cabeçal de união W pode ser operado com um dos dois conjuntos de polias.

Indicação

- Para as configurações, nas quais está previsto somente um conjunto de polias no cabeçal SW, reduzem-se em montagem de um outro conjunto de polias a carga da tabela para o peso próprio deste conjunto de polias suplementar.

AVISO

Perigo de tombamento ou perigo de sobrecarga dos componentes que suportam a carga

Se os dois conjuntos de polias estão montados no cabeçal SW, apesar de estar previsto somente 1 conjunto de polias, a grua pode tombar em levantamento e depósito ou os componentes que suportam a carga podem ser sobrecarregados. Componentes podem partir e causar acidentes mortais!

- O peso do moitão do gancho permitido indicado nas tabelas de levantamento e depósito tem de ser reduzido ao peso próprio do conjunto de polias suplementar.

12.3.2 Peso próprio do conjunto de polias

Conjunto de polias	Peso próprio
320 t	1,5 t
300 t	1,4 t

12.3.3 Configurações da lança para a tabela da capacidade de carga

Lança	Modos de serviço	Cabeçal da lança
S sem lança auxiliar	S, SD, ...	cabeçal SW com conjunto de polias 320 t + 300 t
S com lança auxiliar	SW, SDW, SDWV, SWF, ...	Cabeçal de união W com conjunto de polias 300 t
SL e SL2	SL, SLF, SLD, SL2D, SL2DF, ...	Cabeçal SW com conjunto de polias 320 t
SL3, SL4, SL5, SL10	SL3F, SL4DF, SL5DF, SL10DF, ...	Cabeçal de união F
W	SW, SDW, SDWV, SWF, ...	Cabeçal SW com conjunto de polias 320 t
F	SLF, SL3F, SL2DF, SWF, ...	Cabeçal F

13. Sistema da lança

13.1 Descrição breve dos blocos funcionais do sistema da lança

13.1.1 Lança principal

SL = Lança principal em treliça, construção mista

SL2 = Lança principal em treliça, construção mista, Variante 2

SL3 = Lança principal em treliça, construção mista, Variante 3

SL4 = Lança principal em treliça, construção mista, Variante 4

SL5 = Lança principal em treliça, construção mista, Variante 5

SL10= Lança principal em treliça, construção mista, Variante 10

S = Lança principal em treliça, construção pesada

13.1.2 Acessório fixo

F = Ponta em treliça fixa

H = Lança auxiliar (polia na extremidade do mastro)

Indicação

▶ Para a polia na extremidade do mastro com um dispositivo de pesagem próprio não existem tabelas de carga extra.

13.1.3 Acessório móvel

W = Ponta em treliça basculável, construção pesada

WV = Ponta em treliça, construção pesada, em ângulo fixo para a lança principal

13.1.4 Lança Derrick

D = Lança Derrick (contralança)

13.1.5 Lastro Derrick

B = Lastro em suspensão sem guia

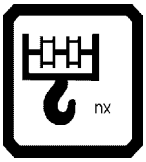
B2 = Lastro em suspensão com guia

BW = Carro do lastro

13.2 Combinação dos blocos funcionais para modos de serviço

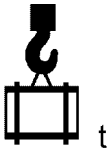
Os blocos funcionais do sistema da lança podem ser combinados uns com os outros segundo determinadas regras para modos de serviço. *Consulte „14. Explicação dos símbolos“ a página 49.*

14. Explicação dos símbolos



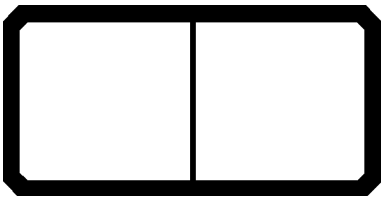
Colocação do cabo de elevação

Este símbolo aparece na tabela "Colocação do cabo de elevação" (1ª. Tabela no Capítulo II). Indicação do número de ramais de cabos de elevação para alcançar uma determinada capacidade de carga.



Carga em toneladas

Este símbolo aparece na tabela "Colocação do cabo de elevação" (1ª. Tabela no Capítulo II). Indicação da carga máxima autorizada dependente da colocação do cabo de elevação.



Símbolo dos modos de serviço

O símbolo dos modos de serviço está montado em duas partes.

Informações que serão representadas na metade do símbolo da esquerda:

- Tipo de lança principal
- Ângulo da lança principal
- Comprimento da lança principal
- Comprimento do cavalete SA
- Peso do moitão do gancho
- Inclinação do terreno
- Restrições

Informações que serão representadas na metade do símbolo da direita:

- Tipo de lança suplementar
- Ângulo da lança suplementar
- Comprimento da lança suplementar
- Peso do moitão do gancho
- Raio de acção do lastro Derrick

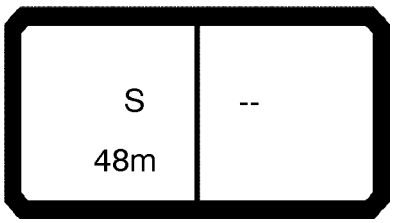
Indicação

- ▶ As informações, as quais serão apresentadas na metade do símbolo da esquerda e da direita do símbolo dos modos de serviço da correspondente tabela da capacidade de carga, têm de corresponder com exactidão com os ajustes seleccionados no dispositivo de segurança contra sobrecarga LICCON!
- ▶ Também em modos de serviço sem acessório a metade do símbolo da direita do símbolo dos modos de serviço tem de ser ajustado de acordo com a representação na tabela da capacidade de carga no dispositivo de segurança contra sobrecarga LICCON, para que o modo de serviço possa ser seleccionado.

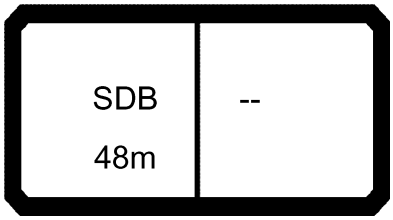
Serviço de grua sem acessório

Em serviço de grua sem acessório está ocupado somente a metade do símbolo da esquerda.

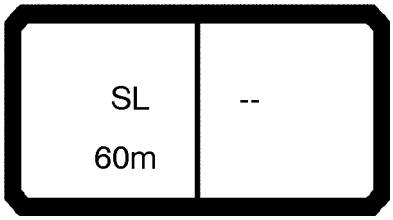
Exemplos:



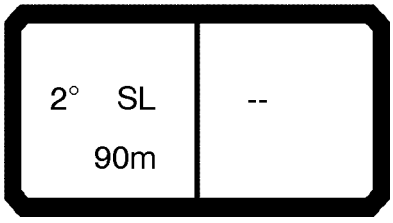
Lado esquerdo = Tipo de serviço da lança principal
- Tipo de lança principal — por ex.: S = Lança principal em treliça, construção pesada
- Comprimento da lança principal — por ex.: 48 m



Lado esquerdo = Tipo de serviço da lança principal
- Tipo de lança principal — por ex.: SDB = Lança principal em treliça, construção pesada, lança Derrick e lastro em suspensão sem guia
- Comprimento da lança principal — por ex.: 48 m



Lado esquerdo = Tipo de serviço da lança principal
- Tipo de lança principal — por ex.: SL = Lança principal em treliça, construção mista
- Comprimento da lança principal — por ex.: 60 m



Lado esquerdo = Tipo de serviço da lança principal
- Inclinação do terreno — por ex.: 2° = A inclinação do terreno máx. permitida é de 2°.
- Tipo de lança principal — por ex.: SL = Lança principal em treliça, construção mista
- Comprimento da lança principal — por ex.: 90 m

Serviço de grua com acessório

Em serviço de grua com acessório as duas metades do símbolo estão ocupadas.

PERIGO

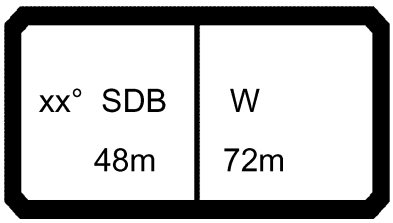
Perigo de acidente

▶ A lança principal e a ponta em treliça basculável não podem ser basculadas simultaneamente mas sim unicamente uma atrás da outra!

Exemplos:

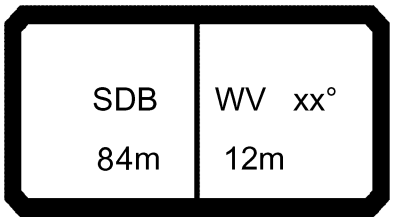
Lado esquerdo = Modo de serviço da lança principal
- Ângulo da lança principal — por ex.: xx° = Lança principal em treliça encontra-se em ângulo fixo, na qual se encontra os dados em graus para a horizontal na linha xx da respectiva tabela de cargas.
- Tipo de lança principal — por ex.: S = Lança principal em treliça, construção pesada
- Comprimento da lança principal — por ex.: 36 m

Lado direito = Modo de serviço de lança suplementar
- Tipo de lança suplementar — por ex.: W = Ponta em treliça basculável, construção pesada
- Comprimento da lança suplementar — por ex.: 24 m



Lado esquerdo = Modo de serviço da lança principal
- Ângulo da lança principal — por ex.: xx° = Lança principal em treliça encontra-se em ângulo fixo, na qual se encontra os dados em graus para a horizontal na linha xx da respectiva tabela de cargas.
- Tipo de lança principal — por ex.: SDB = Lança principal em treliça, construção pesada, lança Derrick e lastro em suspensão sem guia
- Comprimento da lança principal — por ex.: 48 m

Lado direito = Modo de serviço de lança suplementar
- Tipo de lança suplementar — por ex.: W = Ponta em treliça basculável, construção pesada
- Comprimento da lança suplementar — por ex.: 72 m

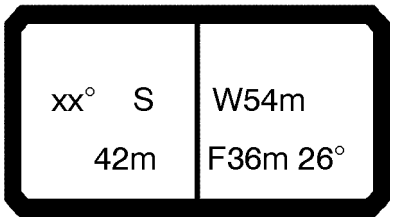


Lado esquerdo = Tipo de serviço da lança principal

- Tipo de lança principal — por ex.: SDB = Lança principal em treliça, construção pesada, lança Derrick e lastro em suspensão sem guia
- Comprimento da lança principal — por ex.: 84 m

Lado direito = Modo de serviço de lança suplementar

- Tipo de lança suplementar — por ex.: WV = Ponta em treliça, construção pesada, em ângulo fixo para a lança principal
- Ângulo da lança suplementar — por ex.: xx° = Lança suplementar em treliça encontra-se em ângulo fixo, na qual se encontra os dados em graus para a horizontal na linha xx da respectiva tabela de cargas, para a lança suplementar em treliça.
- Comprimento da lança suplementar — por ex.: 12 m

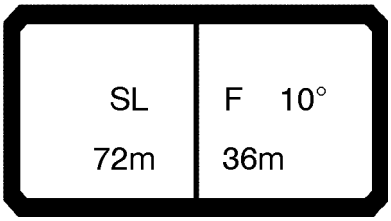


Lado esquerdo = Tipo de serviço da lança principal

- Ângulo da lança principal — por ex.: xx° = Lança principal em treliça encontra-se em ângulo fixo, na qual se encontra os dados em graus para a horizontal na linha xx da respectiva tabela de cargas.
- Tipo de lança principal — por ex.: S = Lança principal em treliça, construção pesada
- Comprimento da lança principal — por ex.: 42 m

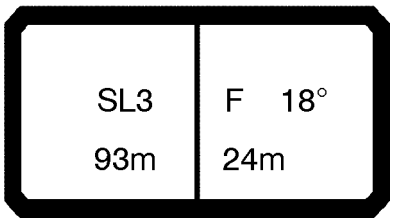
Lado direito = Modo de serviço de lança suplementar

- Tipo de lança suplementar — por ex.: W54m = Ponta em treliça basculável, construção pesada Comprimento da ponta em treliça basculável 54 m.
  por ex.: F36m 26° = Ponta em treliça fixa. Comprimento da ponta em treliça fixa 36 m. Montada num ângulo fixo de 26° para a ponta em treliça basculável.



Lado esquerdo = Modo de serviço da lança principal
- Tipo de lança principal — por ex.: SL = Lança principal em treliça, construção mista
- Comprimento da lança principal — por ex.: 72 m

Lado direito = Modo de serviço de lança suplementar
- Tipo de lança suplementar — por ex.: F = Ponta em treliça fixa
- Ângulo da lança suplementar — por ex.: 10° = montado num ângulo de 10° para a lança principal em treliça.
- Comprimento da lança suplementar — por ex.: 36 m

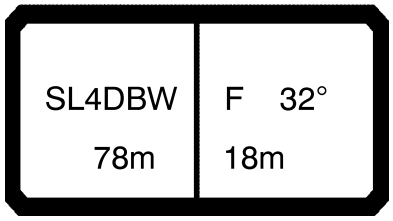


Lado esquerdo = Modo de serviço da lança principal
- Tipo de lança principal — por ex.: SL3 = Lança principal em treliça, construção mista, Variante 3
- Comprimento da lança principal — por ex.: 93 m

Lado direito = Modo de serviço de lança suplementar
- Tipo de lança suplementar — por ex.: F = Ponta em treliça fixa
- Ângulo da lança suplementar — por ex.: 18° = montado num ângulo de 18° para a lança principal em treliça.
- Comprimento da lança suplementar — por ex.: 24 m

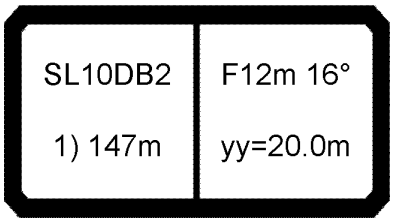
Lado esquerdo = Tipo de serviço da lança principal
- Tipo de lança principal — por ex.: SL2DB = Lança principal em treliça, construção mista, Variante 2, lança Derrick e lastro em suspensão sem guia
- Comprimento da lança principal — por ex.: 108 m

Lado direito = Modo de serviço de lança suplementar
- Tipo de lança suplementar — por ex.: F = Ponta em treliça fixa
- Ângulo da lança suplementar — por ex.: 28° = montado num ângulo de 28° para a lança principal em treliça.
- Comprimento da lança suplementar — por ex.: 30 m



Lado esquerdo = Tipo de serviço da lança principal
- Tipo de lança principal — por ex.: SL4DBW = Lança principal em treliça, construção mista, Variante 4, lança Derrick e carro do lastro
- Comprimento da lança principal — por ex.: 78 m

Lado direito = Modo de serviço de lança suplementar
- Tipo de lança suplementar — por ex.: F = Ponta em treliça fixa
- Ângulo da lança suplementar — por ex.: 32° = montado num ângulo de 32° para a lança principal em treliça.
- Comprimento da lança suplementar — por ex.: 18 m



Lado esquerdo = Tipo de serviço da lança principal
- Tipo de lança principal — por ex.: SL10DB2 = Lança principal em treliça, construção mista, Variante 10, lança Derrick e lastro em suspensão com guia
- Restrição — por ex.: 1) = *Consulte „Descrição de limitações nos modos de serviço“ a página 60.*
- Comprimento da lança principal — por ex.: 147 m

Lado direito = Modo de serviço de lança suplementar
- Tipo de lança suplementar — por ex.: F = Ponta em treliça fixa
- Comprimento da lança suplementar — por ex.: 12 m
- Ângulo da lança suplementar — por ex.: 16° = montado num ângulo de 16° para a lança principal em treliça.
- Raio de acção do lastro Derrick — por ex.: yy=20.0m = Raio de acção do lastro Derrick 20.0 m

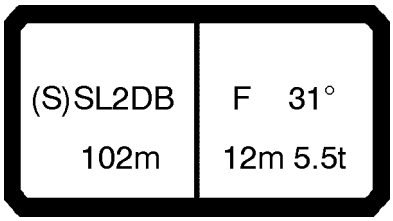
Serviço de grua com lança principal com acessório montado

Em serviço de grua na lança principal com acessório montado estão as duas metades do símbolo ocupados.

PERIGO

Perigo de tombamento ou perigo de sobrecarga dos componentes que suportam a carga!

- ▶ Quando um tipo serviço com uma lança principal for indicado entre parêntesis, por exemplo (S)SL2DB, então a carga pode ser levantada com a lança suplementar montada na lança principal!



Exemplos:

Lado esquerdo = Tipo de serviço da lança principal

- Tipo de lança principal — por ex.: (S)SL2DB = Serviço de grua com lança principal em treliça, construção mista, Variante 2, lança Derrick e lastro em suspensão sem guia. Carga na lança principal.
- Comprimento da lança principal — por ex.: 102 m

Lado direito = Modo de serviço de lança suplementar

- Tipo de lança suplementar — por ex.: F = Ponta em treliça fixa
- Ângulo da lança suplementar — por ex.: 31° = montado num ângulo de 31° para a lança principal em treliça.
- Comprimento da lança suplementar — por ex.: 12 m
- Peso do moitão do gancho — por ex.: 5,5 t = Peso do moitão do gancho, que deve estar na lança suplementar em treliça.

Modos de serviço com vários moitões de gancho

Em alguns modos de serviço o peso do moitão do gancho do moitão do gancho será indicado, onde não está nenhuma carga pendurada.

AVISO

Perigo de acidente!

Quando no símbolo do modo de serviço o moitão do gancho com o seu peso não está montado na correspondente lança, não se pode trabalhar com a grua. A consequência disso podem ser acidentes graves.

▶ O moitão do gancho indicado com o seu peso no símbolo dos modos de serviço tem de estar montado na correspondente lança!

Serão diferenciados 2 casos:

- Peso do moitão do gancho na lança principal em serviço de grua na lança suplementar
- Peso do moitão do gancho na lança suplementar em serviço de grua na lança principal

Peso do moitão do gancho na lança principal em serviço de grua na lança suplementar

Exemplos:

Lado esquerdo = Tipo de serviço da lança principal

- Tipo de lança principal — por ex.: SL2DB = Lança principal em treliça, construção mista, Variante 2, lança Derrick e lastro em suspensão sem guia
- Peso do moitão do gancho — por ex.: 8,5 t = Peso do moitão do gancho, que deve estar na lança principal em treliça.
- Comprimento da lança principal — por ex.: 102 m

Lado direito = Modo de serviço de lança suplementar

- Tipo de lança suplementar — por ex.: F = Ponta em treliça fixa
- Ângulo da lança suplementar — por ex.: 13° = montado num ângulo de 13° para a lança principal em treliça.
- Comprimento da lança suplementar — por ex.: 24 m

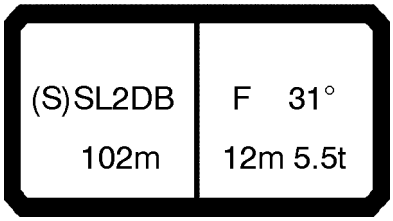
Peso do moitão do gancho na lança suplementar em serviço de grua na lança principal

PERIGO

Perigo de tombamento ou perigo de sobrecarga dos componentes que suportam a carga!

▶ Quando um tipo serviço com uma lança principal for indicado entre parêntesis, por exemplo (S)SL2DB, então a carga pode ser levantada com a lança suplementar montada na lança principal!

Exemplos:



Lado esquerdo = Tipo de serviço da lança principal

- Tipo de lança principal — por ex.: (S)SL2DB = Serviço de grua com lança principal em treliça, construção mista, Variante 2, lança Derrick e lastro em suspensão sem guia. Carga na lança principal.
- Comprimento da lança principal — por ex.: 102 m

Lado direito = Modo de serviço de lança suplementar

- Tipo de lança suplementar — por ex.: F = Ponta em treliça fixa
- Ângulo da lança suplementar — por ex.: 31° = montado num ângulo de 31° para a lança principal em treliça.
- Comprimento da lança suplementar — por ex.: 12 m
- Peso do moitão do gancho — por ex.: 5,5 t = Peso do moitão do gancho, que deve estar na lança suplementar em treliça.

Modos de serviço de montagem

PERIGO

Perigo de acidente!

- O modo de serviço de montagem SA pode ser utilizado unicamente para montagem dos componentes da grua. As instruções de montagem no manual de instruções têm de ser respeitadas obrigatoriamente!

Exemplos:

Lado esquerdo = Modo de serviço da lança principal

- Tipo de lança principal — por ex.: SA = Serviço de montagem com cavalete SA
- Comprimento do cavalete SA — por ex.: 10,5 m

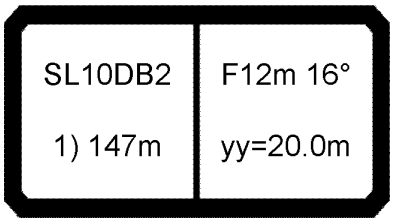
Descrição de limitações nos modos de serviço

Em alguns modos de serviço aparecem adicionalmente sinais, cifras e letras no símbolo de modos de serviço.

Características: 1)

Indicação

- Na colocação do cabo de elevação para a carga máxima, o moitão do gancho não pode ser baixado até o solo!

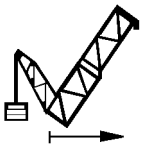


Nos modos de serviço que são marcados com 1) e com a colocação do cabo de elevação para a carga máxima, o moitão do gancho não alcança o solo.

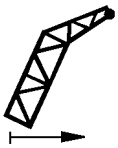
Símbolos do alcance da lança

O alcance da lança (raio de acção de trabalho) é a distância do centro de gravidade horizontal da carga do eixo de rotação do chassi superior, medida no solo sob carga.

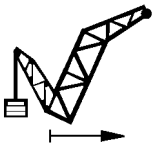
Símbolo do alcance da lança para os modos de serviço da lança principal.



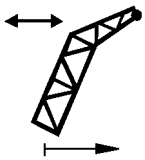
Símbolo do alcance da lança para modos de serviço da lança principal com lastro Derrick e lastro Derrick.



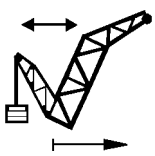
Símbolo do alcance da lança para tipos de serviço com lança suplementar com acessório fixo.



Símbolo do alcance da lança para modos de serviço com lança suplementar com acessório fixo, lança Derrick e lastro Derrick.



Símbolo do alcance da lança para tipos de serviço com lança suplementar com acessório móvel.



Símbolo do alcance da lança para modos de serviço com lança suplementar com acessório móvel, lança Derrick e lastro Derrick.

m > < t

Comprimento da lança principal em treliça

Na linha por baixo deste símbolo estão registados em colunas os diversos comprimentos de lança. As letras ao lado do símbolo da lança indicam, em qual unidade de medição estão especificados cada um dos valores. Por ex.: “m > < t“ significa, que todos os dados de comprimento ocorrem em metros [m], todos os dados de peso em toneladas [t].

CODE〉0010〈

Código curto

Código curto de 4 números; descreve em forma codificada o tipo de serviço ajustado / e ou o estado do equipamento montado no momento. O código curto pode ser directamente introduzido na protecção contra sobrecarga LICCON, para seleccionar a tabela de carga correspondente.

* n *

Colocação do cabo de elevação

Aparece nas tabelas de carga como linha por baixo dos valores de carga. Indica o número de ramais de cabos de elevação, quais são necessários para poder levantar a carga máxima da correspondente coluna da tabela em serviço de grua com 1 cabrestante do cabo de elevação. Se um valor de carga exceder o valor indicado na coluna com a colocação máxima possível do cabo em serviço de grua com 1 cabrestante do cabo de elevação para a carga levantável, então existe atrás do número de colocação uma marcação (**!**), que indica, que para levantar esta carga é necessário um equipamento especial.

A colocação do cabo necessária em serviço paralelo do cabrestante do cabo de elevação 1 e cabrestante do cabo de elevação 2 tem de ser calculada da tabela de colocação. *Consulte „8. Colocação do cabo de elevação“ a página 10.*

xx

Ângulo da lança principal / Ângulo relativo da lança suplementar

Aparece somente nos tipos de serviço com ponta em treliça basculável como linha por baixo da colocação do cabo de elevação.
Nas colunas estão descritas ao lado uma da outra o ângulo da lança principal respectivamente ângulo da lança suplementar que têm de ser ajustados, para poder levantar os valores de carga da correspondente coluna de carga.

Indicação

- Quando está apresentado xx na metade do símbolo esquerdo do símbolo dos modos de serviço (modo de serviço da lança principal), estão apresentados nas colunas o ângulo da lança principal.
- Quando está apresentado xx na metade do símbolo da direita do símbolo dos modos de serviço (modo de serviço de lança suplementar), estão apresentados nas colunas o ângulo relativo da lança suplementar para a lança principal.

Raio de acção do lastro Derrick

yy

Aparece somente nos tipos de serviço com lastro Derrick como linha por baixo da colocação do cabo de elevação. Nas colunas estão apresentados ao lado um do outro o raio de acção do lastro Derrick, que têm de estar ajustados, para que possa ser levantada a carga da correspondente coluna de cargas.

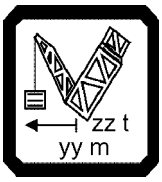
Peso do lastro Derrick

zz

Aparece somente nos modos de serviço com lastro Derrick como linha por baixo do raio de acção do lastro Derrick. Nas colunas estão apresentados ao lado um do outro o peso do lastro Derrick, que têm de estar puxados, para que possa ser levantada a carga da correspondente coluna de cargas.

Raio de acção do lastro Derrick e peso do lastro Derrick

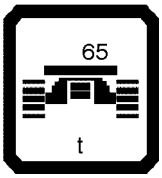
O símbolo aparece nos modos de serviço com lastro Derrick em vez do símbolo zona de rotação. A zona de rotação permitida do chassi superior é neste modos de serviço 360°.



Informações no símbolo

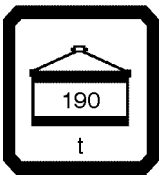
zz — Peso do lastro Derrick, que tem de estar puxado, para poder levantar a carga na correspondente coluna da tabela.

yy — Raio de acção do lastro Derrick, que tem de estar ajustado, para poder levantar a carga na correspondente coluna da tabela.



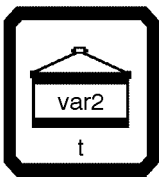
Lastro central

A dimensão do lastro central está indicada neste símbolo em toneladas [t], que se tem que encontrar no veículo de rastos, para poder alcançar os valores da tabela presente.



Contrapeso

A dimensão do contrapeso está indicada neste símbolo em toneladas [t], que se tem que encontrar na plataforma giratória, para poder alcançar os valores da tabela presente.



Combinações do lastro

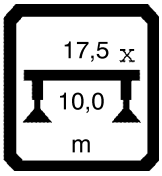
Neste símbolo estão indicadas várias combinações do lastro. Na tabela a seguir é evidente a composição das combinações do lastro. Para se poder alcançar os valores da tabela da capacidade de carga presente, têm de ser montados na posição correspondente os contrapesos determinados e o lastro central das respetivas combinações do lastro.

Combinações do lastro	Contrapeso na plataforma giratória	Contrapeso na extensão das plataformas giratórias	Lastro 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

Zona de rotação

Indicação da zona de rotação do chassi superior da grua para a correspondente tabela de capacidade de carga:

360° = movimento giratório ilimitado



Serviço de grua "Grua apoiada"

Dados da base de apoio (p.ex.: 17,5 m x 10,0 m = Comprimento x Largura). Os apoios hidráulicos da grua têm que ser expandidos para a medida indicada neste símbolo, quando se tiver que trabalhar com a correspondente tabela de cargas.

Velocidade do vento permitida

Dados da velocidade do vento em [m/s] até a velocidade, dependente do comprimento da lança permitido para o serviço de grua. Caso a velocidade do vento exceder o valor especificado, deverá parar o serviço de grua e sendo necessário desequipar a grua.

15. Velocidade de rotação e inclinação lateral permitida

15.1 Velocidade de rotação máxima permitida do chassi superior da grua com carga nominal suspensa

AVISO

Perigo de acidente!

Se a velocidade de rotação máxima permitida for ultrapassada, a grua pode tombar e os componentes que suportam a carga serem sobrecarregados!

▶ A velocidade de rotação máxima permitida não pode ser ultrapassada!

Modo de serviço	Número de Mecanismo de rotação	Velocidade de rotação permitida LICCON [%]	Velocidade de rotação permitida $\left[\frac{1}{min}\right]$
Todos os modos de serviço	1	5	0,05
	2	5	0,05
	3	5	0,04

15.2 Inclinação lateral máxima permitida da grua durante o trabalho com as tabelas de carga

AVISO

Perigo de queda!

Quando a inclinação lateral máxima permitida da grua for ultrapassada a grua pode tombar!

▶ A inclinação lateral máxima permitida não deve ser ultrapassada!

Modo de serviço	Inclinação lateral máxima permitida da grua durante o trabalho com as tabelas de carga
Sobre rastos	0,3°
Sobre apoios	0,0°

16. Influências do vento em serviço de grua

16.1 Definição dos termos

Para melhor compreensão serão apresentados seguidamente os seguintes termos mais importantes sobre as influências do vento em serviço de grua.

Observação

- ▶ Familiarize-se com os termos. Para determinação e calculação da velocidade do vento permitida tem de conhecer os fatores de influência!
- ▶ Entre em contacto com a Liebherr-Werk Ehingen GmbH, quando necessitar de outras informações sobre as influências do vento em serviço de grua!

		Denominação	Definição
A_P	[m^2]	Superfície de projecção	A superfície decisiva dirigida para afluição na vertical para a calculação da superfície exposta ao vento.
c_W		Coeficiente da resistência ao vento	Valor para a resistência de corrente para um corpo abrangido pelo vento.
A_W	[m^2]	Superfície exposta ao vento	Superfície exposta ao vento = Superfície de projecção x Coeficiente da resistência ao vento $A_W = A_P \times c_W$
m_T	[t]	Carga	Valor das tabelas respectivo das tabelas da capacidade de carga.
m_H	[t]	Carga de elevação	O peso a ser levantado (massa) (inclusive meios de fixação, moitão do gancho e eventualmente parte do cabo de elevação, a qual ainda não foi considerada na calculação). A carga de elevação pode alcançar no máximo o valor da tabela das tabelas da capacidade de carga.
m_N	[t]	Carga útil	Peso (massa) do componente estrutural a ser levantado (sem meio de fixação e moitão do gancho).

		Denominação	Definição
v(z)	[m/s]	Velocidade de rajadas 3 segundos	Valor médio da velocidade do vento formado durante um espaço de tempo de 3 segundos numa altura z acima do solo.
v_{max}	[m/s]	Velocidade do vento máxima permitida	Velocidade de rajadas 3 segundos máxima permitida em altura de elevação máxima.
v_{max_TAB}	[m/s]	Velocidade do vento máxima permitida (tabela da capacidade de carga)	Velocidade de rajadas máxima permitida 3 segundos em altura de elevação máxima, a qual será indicada para os valores de carga nas tabelas da capacidade de carga.
p	[N/m^2]	Pressão dinâmica	Carga de pressão sobre um corpo por consequência da afluição do vento. Pressão dinâmica = Densidade/2 x (velocidade de rajadas 3 segundos)^2 $p = \rho/2 \times (v(z))^2$ (ρ = Densidade do ar = 1,25 kg/m^3)
F_W	[N]	Carga de vento	Influência de força sobre um corpo por consequência da afluição do vento. $F_W = A_W \times p$

16.2 Influência do vento sobre o dispositivo de segurança contra sobrecarga LICCON

Especialmente em modos de serviço com sistemas da lança comprido e posição da lança a pique o vento pode adicionalmente carregar ou aliviar o sistema de grua. Com isso a indicação da carga será falsificada. Eventualmente o dispositivo de segurança contra sobrecarga LICCON pode desligar muito cedo ou muito tarde.

16.2.1 Vento por trás

Com vento por trás o sistema da lança será adicionalmente carregado. A indicação da carga é demasiado alta. O desligamento do dispositivo de segurança contra sobrecarga LICCON ocorre já com uma carga de elevação, a qual é menor do que a carga máxima.

16.2.2 Vento pela frente

Com vento pela frente o sistema da lança será adicionalmente aliviado. A indicação da carga é demasiado baixa. O desligamento do dispositivo de segurança contra sobrecarga LICCON ocorre somente com uma carga de elevação, a qual é maior do que a carga máxima.

PERIGO

Perigo de tombamento e perigo de sobrecarga dos componentes que suportam a carga!

O vento pela frente não reduz a carga do gancho, cabo de elevação, polias do cabo de elevação e cabrestante de elevação. Com vento pela frente estes blocos funcionais podem através do levantamento de carga serem sobrecarregados até ao desligamento do dispositivo de segurança contra sobrecarga LICCON!
Quando o vento pela frente abranda, a grua completa pode ser sobrecarregada, quando anteriormente foi carregada até ao desligamento do dispositivo de segurança contra sobrecarga LICCON.

- ▶ O condutor da grua tem de conhecer o peso da carga de elevação e não pode ultrapassar a carga máxima!

16.2.3 Vento lateral

Com vento lateral o sistema da lança será carregado lateralmente. A indicação da carga é aproximadamente igual como em serviço de grua sem influências do vento.

PERIGO

Perigo de tombamento e perigo de sobrecarga dos componentes que suportam a carga!

Se em serviço de grua a velocidade do vento é maior do que a velocidade do vento máxima permitida, então a grua com vento lateral será sobrecarregada despercebidamente!

- ▶ Averiguar antes do serviço de grua as velocidades do vento máxima permitida e se necessário executar o cálculo da superfície da carga submetida ao vento!

16.3 Velocidade do vento permitida e cálculo da superfície da carga submetida ao vento

PERIGO

Perigo de tombamento e perigo de sobrecarga dos componentes que suportam a carga!

- O gruísta tem de se informar antes de iniciar o trabalho junto dos serviços meteorológicos responsáveis sobre as velocidades do vento esperadas para o tempo de aplicação. Se forem esperadas velocidades do vento proibidas, então é proibido levantar a carga de elevação!
- A velocidade de rajadas 3 segundos v(z) na altura de elevação máxima não pode ultrapassar a velocidade do vento máxima permitida (v_{max}) e a velocidade do vento máxima permitida segundo a tabela da capacidade de carga (v_{max_TAB}) em nenhum momento!

Observação

- A velocidade do vento máxima permitida (v_{max}) e a velocidade do vento máxima permitida segundo a tabela da capacidade de carga (v_{max_TAB}) refere-se sempre à velocidade de rajadas 3 segundos, a qual existe na altura de elevação máxima.

  Os serviços meteorológicos informam em vez da velocidade de rajadas 3 segundos regularmente também uma velocidade do vento, a qual é indicada como valor médio durante um espaço de tempo de 10 minutos (os chamados 10 minutos médio). Isto refere-se como a força do vento à escala Beaufort normalmente para o valor médio da velocidade do vento, a qual é determinada num espaço de tempo de 10 minutos numa altura de 10 m acima do solo respectivamente acima do nível da água do mar.

  A velocidade de rajadas 3 segundos decisiva para a calculação em altura de elevação máxima é claramente superior do que o valor médio da velocidade do vento, a qual será determinada para além de 10 minutos numa altura de 10 m acima do solo!

O serviço de grua é permitido por princípio até à velocidade do vento máxima permitida (v_{max_TAB}) indicada na correspondente tabela da capacidade de carga para o actual comprimento da lança.

Condição para isso é:

- a superfície exposta ao vento (A_W) da carga de elevação não é maior do que 1,2 m^2/t

PERIGO

Perigo de tombamento e perigo de sobrecarga dos componentes que suportam a carga!

- ▶ A máxima velocidade permitida conforme a tabela de carga (v_{max_TAB}) não deverá ser ultrapassada, também quando a superfície exposta ao vento da carga de elevação (A_W) for menor que 1,2 m^2/t!
- ▶ Se a superfície exposta ao vento (A_W) da carga de elevação é maior do que 1,2 m^2/t, a velocidade do vento máxima permitida (v_{max}) para a situação de carga deve ser cálculada novamente!

16.3.1 Determinação da velocidade do vento máxima permitida

Com os métodos seguintes pode ser de novo determinada a velocidade do vento máxima permitida:

1.) Calculação com fórmula
2.) Determinação com Diagramas da força do vento

16.3.2 Calculação da velocidade do vento máxima permitida com fórmula

$$V_{max} = V_{max\_TAB} \times \sqrt{\frac{1{,}2\,\frac{m^2}{t} \times m_H}{A_W}}$$

Fórmula para a calculação da velocidade do vento máxima permitida

Para a calculação são necessários os seguintes dados:

- Velocidade do vento máxima permitida segundo a tabela da capacidade de carga (v_{max_TAB})
- Carga de elevação (m_H)
- Superfície de projecção da carga de elevação (A_P)
- Coeficiente da resistência ao vento (c_W)

Descrição da evolução:

1.) Calculação da superfície exposta ao vento ($A_W = A_P \times c_W$)
2.) Controlar, se a superfície exposta ao vento A_W ultrapassa o valor limite de 1,2 m^2/t
3.) Calculação da velocidade do vento máxima permitida (v_{max})

Exemplo para a calculação da velocidade do vento máxima permitida

Dados para a calculação da situação de carga:

v_{max_TAB} = 9,0 m/s
m_H = 50,0 t
A_P = 70,0 m^2
c_W = 1,4

Passo 1: calculação da superfície exposta ao vento

$A_W = A_P \times c_W$
A_W = 70,0 m^2 x 1,4
A_W = 98,0 m^2

Resultado:
- a superfície exposta ao vento A_W é de: **98,0 m^2**

Passo 2: controlar, se a superfície exposta ao vento A_W ultrapassa o valor limite de 1,2 m^2/t

A superfície exposta ao vento por tonelada de carga de elevação é de: 98,0 m^2 / 50 t = **1,96 m^2/t**

Resultado:
- a superfície exposta ao vento por tonelada de carga de elevação ultrapassa o valor limite de 1,2 m^2/t.

▶ A velocidade do vento máxima permitida tem de ser de novo calculada!

Passo 3: calculação da velocidade do vento máxima permitida

$$V_{max} = V_{max\_TAB} \times \sqrt{\frac{1{,}2\,\frac{m^2}{t} \times m_H}{A_W}}$$

$$V_{max} = 9\,m/s \times \sqrt{\frac{1{,}2\,\frac{m^2}{t} \times 50t}{98\,m^2}}$$

$$\underline{\underline{V_{max} = 7{,}04\,m/s}}$$

Resultado:
- a velocidade do vento máxima permitida é de: **7,04 m/s**

16.3.3 Determinação da velocidade do vento máxima permitida com os Diagramas da força do vento

Dependentemente da velocidade do vento máxima permitida segundo a tabela da capacidade de carga (v_{max_TAB}) pode ser determinada a velocidade do vento máxima permitida (v_{max}) para a situação de carga com os seguintes Diagramas da força do vento.

Disposição dos Diagramas da força do vento:

- **Diagrama 7,0 m/s:** diagramas da força do vento para tabelas de carga com uma velocidade do vento máxima permitida (v_{max_TAB}) de 7,0 m/s
- **Diagrama 8,6 m/s:** diagramas da força do vento para tabelas de carga com uma velocidade do vento máxima permitida (v_{max_TAB}) de 8,6 m/s
- **Diagrama 9,0 m/s:** diagramas da força do vento para tabelas de carga com uma velocidade do vento máxima permitida (v_{max_TAB}) de 9,0 m/s
- **Diagrama 9,9 m/s:** diagramas da força do vento para tabelas de carga com uma velocidade do vento máxima permitida (v_{max_TAB}) de 9,9 m/s
- **Diagrama 11,1 m/s:** diagramas da força do vento para tabelas de carga com uma velocidade do vento máxima permitida (v_{max_TAB}) de 11,1 m/s
- **Diagrama 12,8 m/s:** diagramas da força do vento para tabelas de carga com uma velocidade do vento máxima permitida (v_{max_TAB}) de 12,8 m/s
- **Diagrama 14,3 m/s:** diagramas da força do vento para tabelas de carga com uma velocidade do vento máxima permitida (v_{max_TAB}) de 14,3 m/s

AVISO

Perigo de acidente na utilização de diagramas da força do vento falsas!

▶ A velocidade do vento máxima permitida segundo as tabela da capacidade de carga (v_{max_TAB}) tem de condizer com a velocidade do vento máxima permitida dos diagramas da força do vento!

Para a determinação serão necessários os seguintes dados:

- Velocidade do vento máxima permitida segundo a tabela da capacidade de carga (v_{max_TAB})
- Carga de elevação (m_H)
- Superfície de projecção da carga de elevação (A_P)
- Coeficiente da resistência ao vento (c_W)

Descrição da evolução:

1.) Calculação da superfície exposta ao vento ($A_W = A_P \times c_W$)
2.) Controlar, se a superfície exposta ao vento A_W ultrapassa o valor limite de 1,2 m^2/t
3.) Determinação da velocidade do vento máxima permitida (v_{max}) dos Diagramas da força do vento correspondente

Exemplo para a determinação da velocidade do vento máxima permitida

Dados para a calculação da situação de carga:

v_{max_TAB} = 9,0 m/s
m_H = 50,0 t
A_P = 70,0 m^2
c_W = 1,4

Passo 1: calculação da superfície exposta ao vento

$A_W = A_P \times c_W$
A_W = 70,0 m^2 x 1,4
A_W = 98,0 m^2

Resultado:

- a superfície exposta ao vento A_W é de: **98,0 m^2**

Passo 2: controlar, se a superfície exposta ao vento A_W ultrapassa o valor limite de 1,2 m^2/t

A superfície exposta ao vento por tonelada de carga de elevação é de: 98,0 m^2 / 50 t = **1,96 m^2/t**

Resultado:

- a superfície exposta ao vento por tonelada de carga de elevação ultrapassa o valor limite de 1,2 m^2/t.

▶ A velocidade do vento máxima permitida tem de ser de novo determinada!

Passo 3: determinação da velocidade do vento máxima permitida (v_{max}) do Diagrama da força do vento correspondente

Determinação da velocidade do vento máxima permitida (v_{max}) do Diagrama da força do vento correspondente para tabelas de carga com uma velocidade do vento máxima permitida (v_{max_TAB}) de 9 m/s.

Diagrama 9,0 m/s

Resultado:

- a velocidade do vento máxima permitida é de: **7,04 m/s**

16.3.4 Diagramas da força do vento

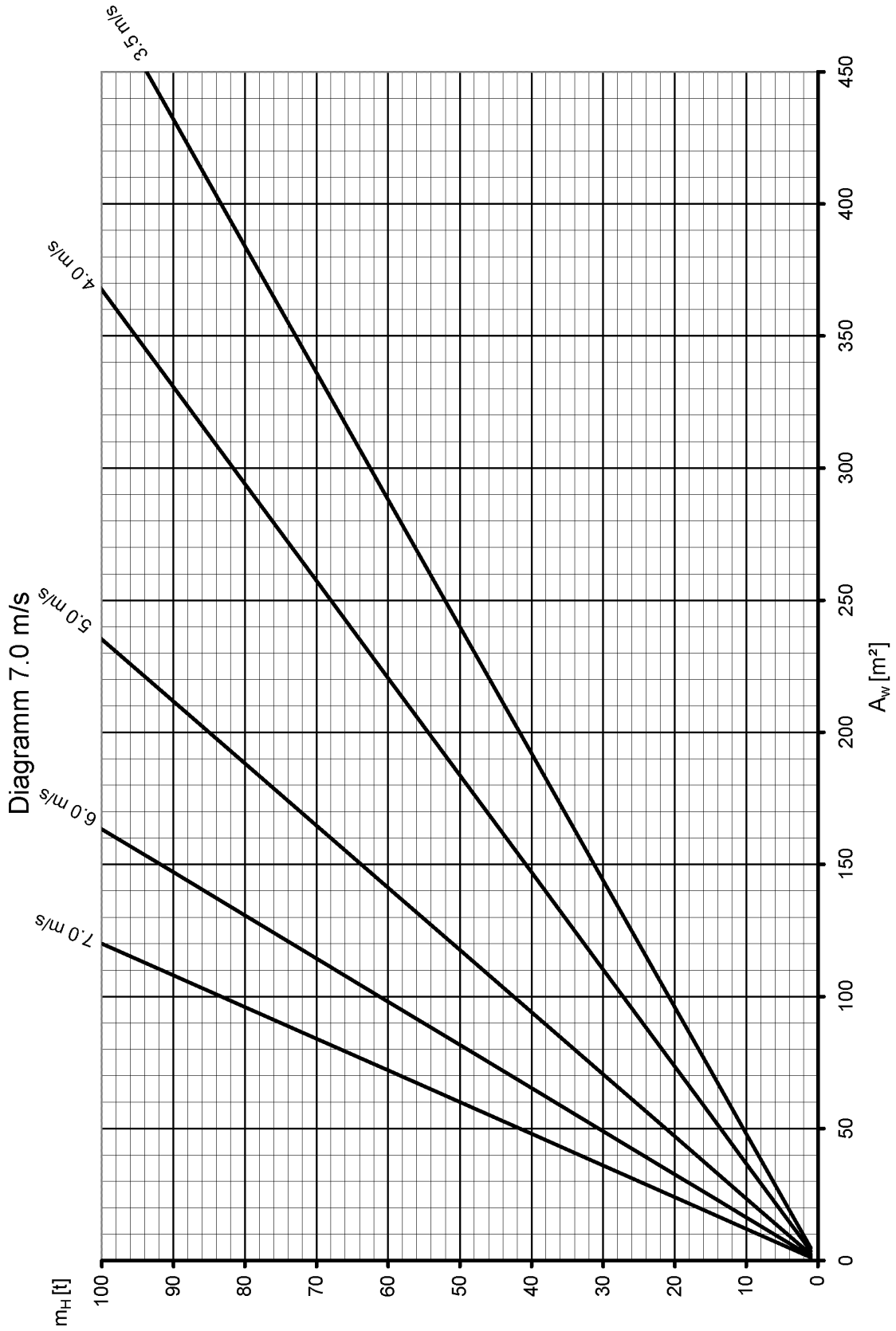


Diagrama da força do vento 7,0 m/s para tabelas de carga com uma velocidade do vento máxima permitida (v_{max_TAB}) de 7,0 m/s.

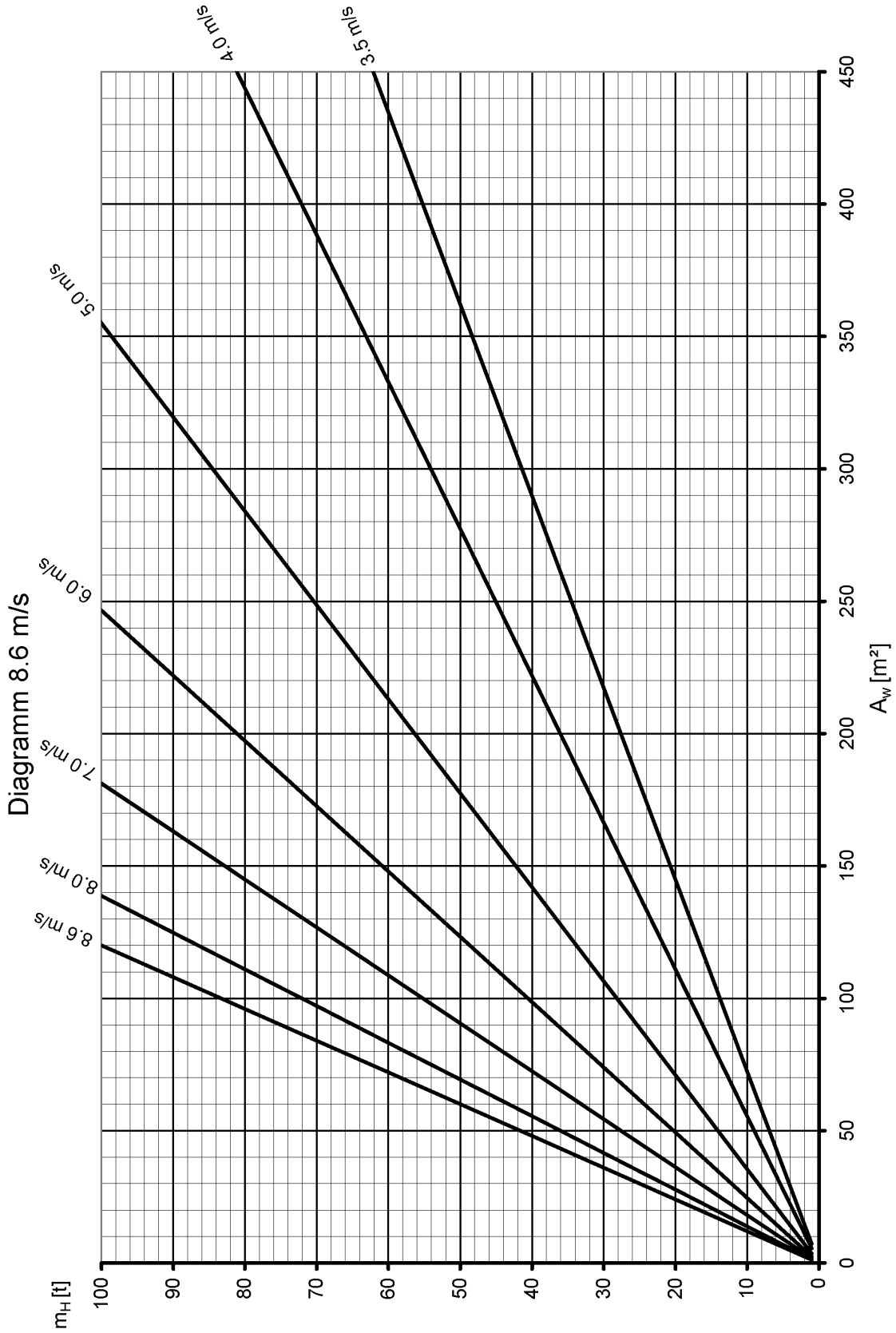


Diagrama da força do vento 8,6 m/s para tabelas de carga com uma velocidade do vento máxima permitida (v_{max_TAB}) de 8,6 m/s.

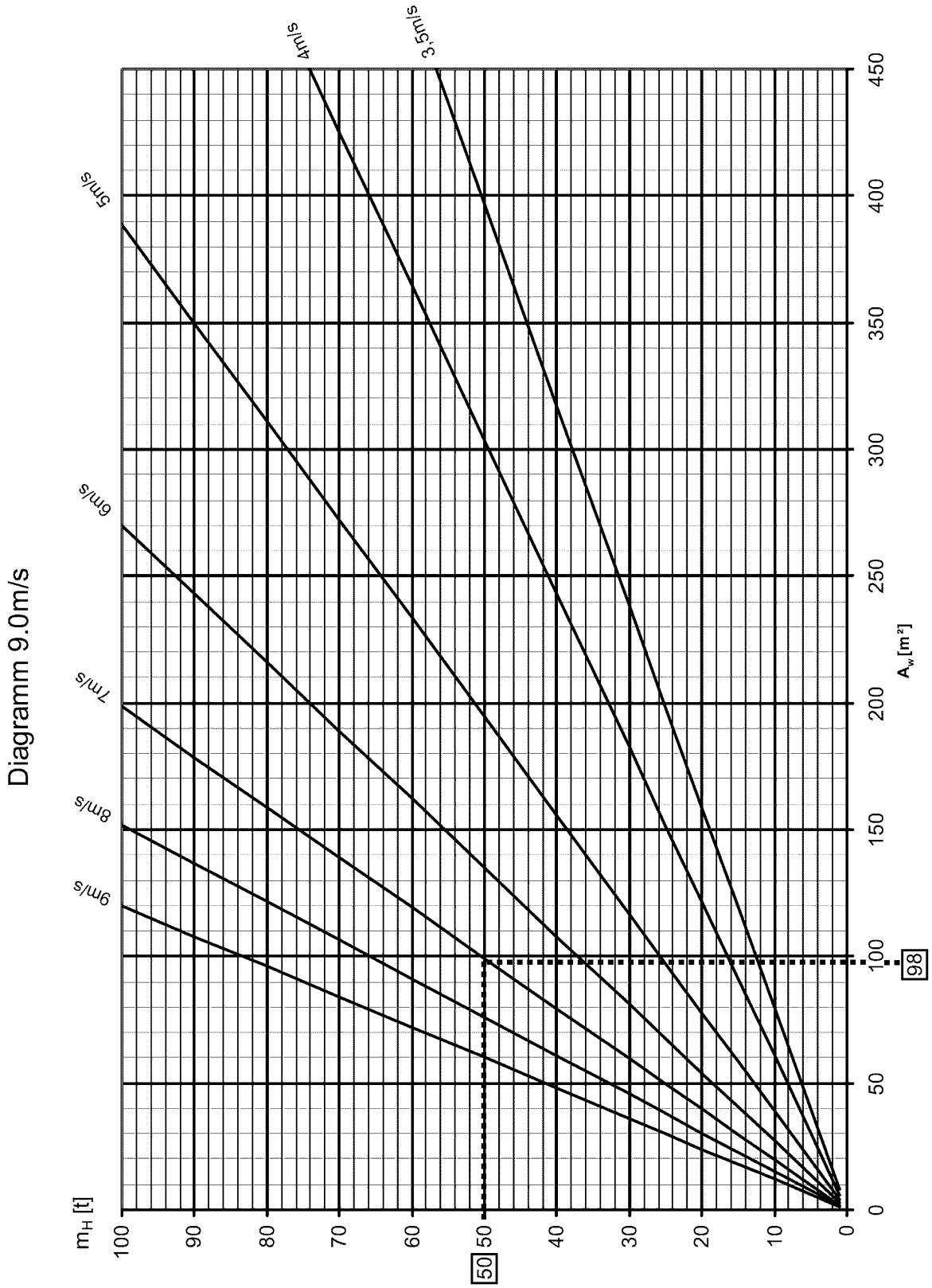


Diagrama da força do vento 9,0 m/s para tabelas de carga com uma velocidade do vento máxima permitida (v_{max_TAB}) de 9,0 m/s.

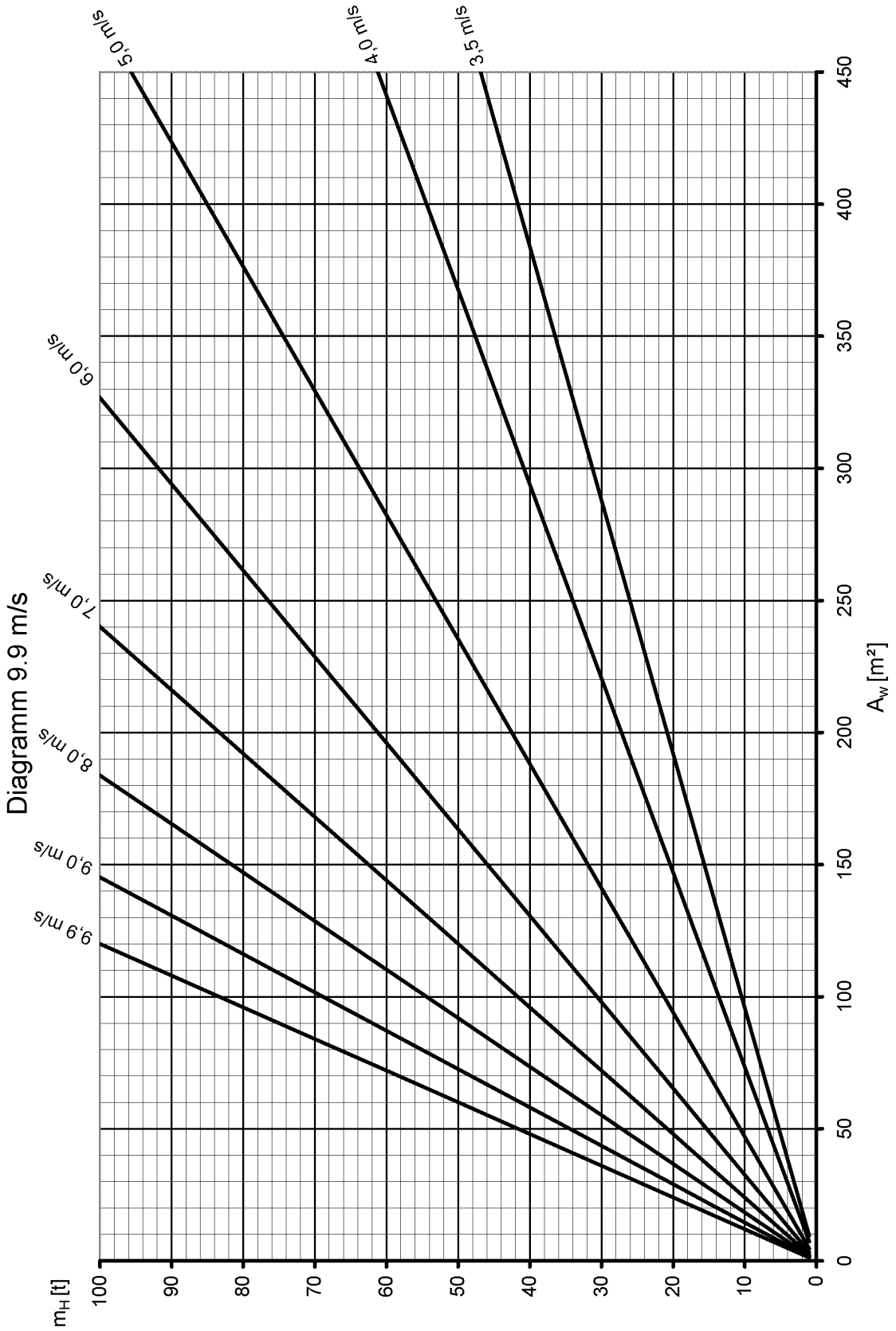


Diagrama da força do vento 9,9 m/s para tabelas de carga com uma velocidade do vento máxima permitida (v_{max_TAB}) de 9,9 m/s.

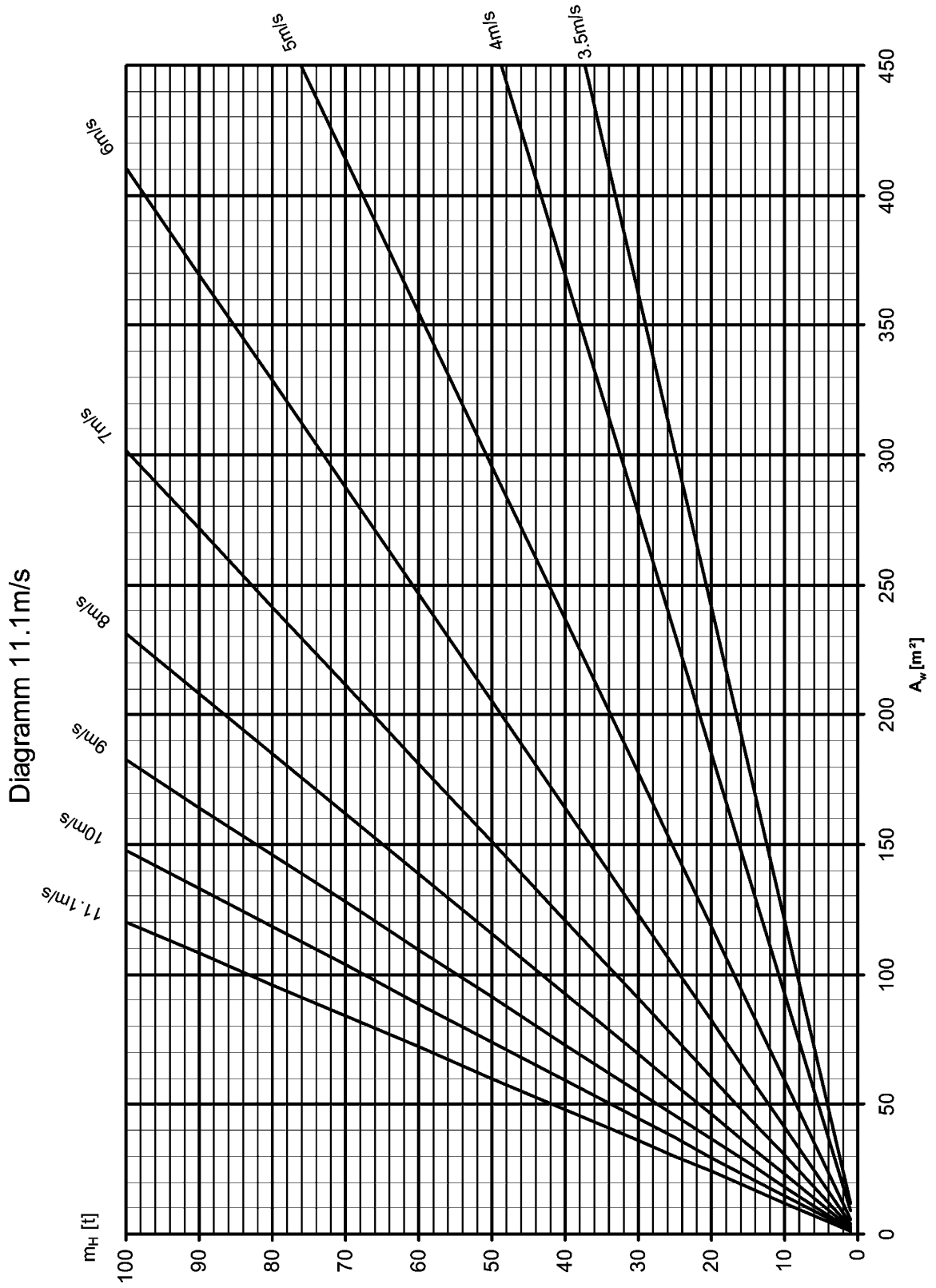


Diagrama da força do vento 11,1 m/s para tabelas de carga com uma velocidade do vento máxima permitida (v_{max_TAB}) de 11,1 m/s.

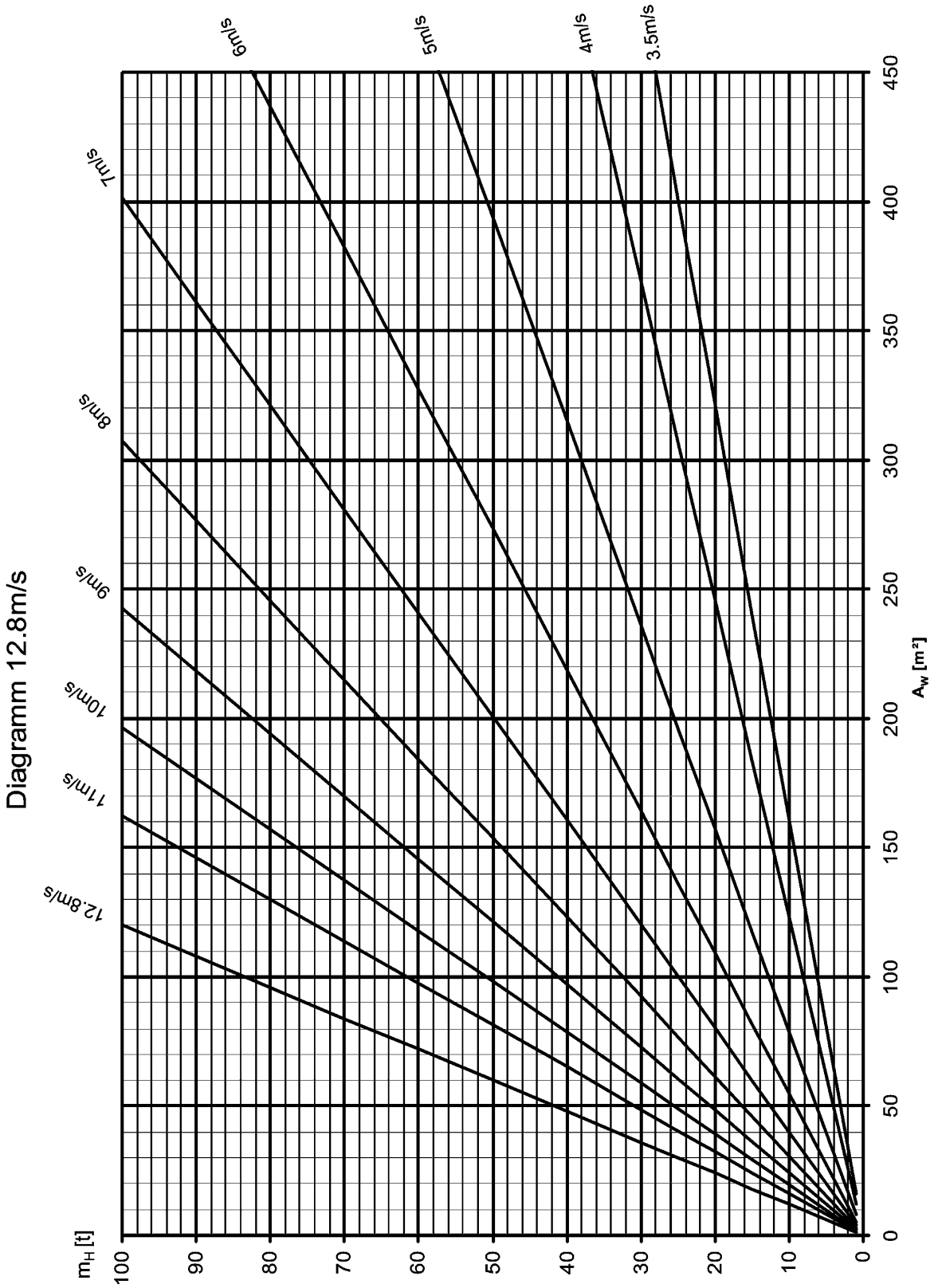


Diagrama da força do vento 12,8 m/s para tabelas de carga com uma velocidade do vento máxima permitida (v_{max_TAB}) de 12,8 m/s.

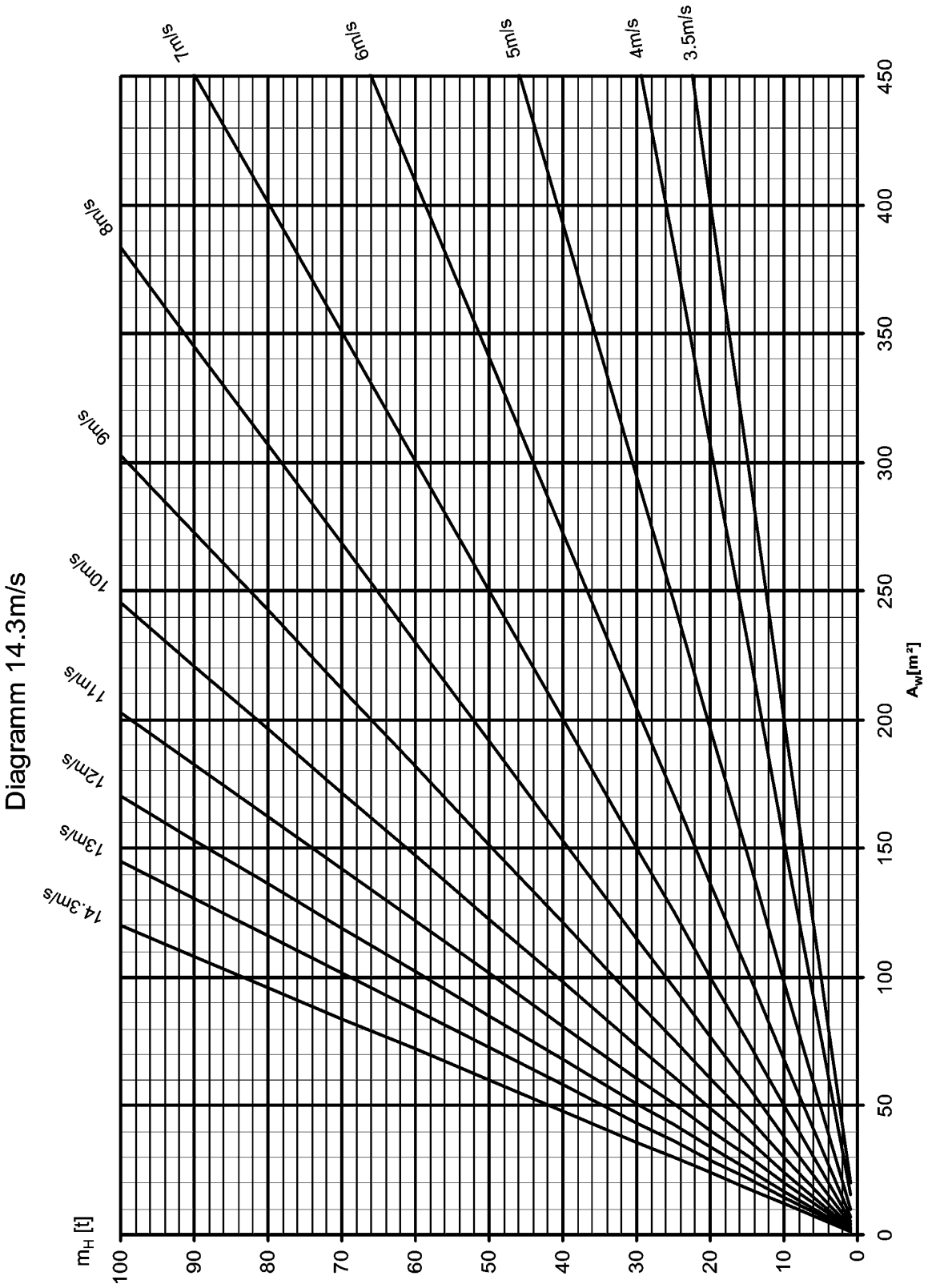
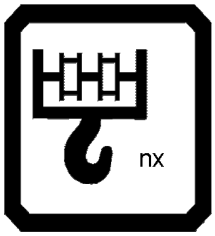


Diagrama da força do vento 14,3 m/s para tabelas de carga com uma velocidade do vento máxima permitida (v_{max_TAB}) de 14,3 m/s.



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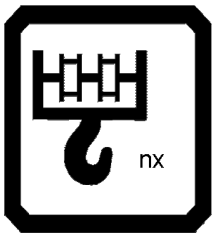

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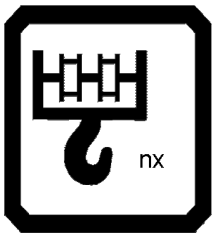

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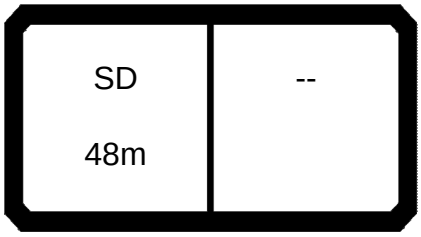
18



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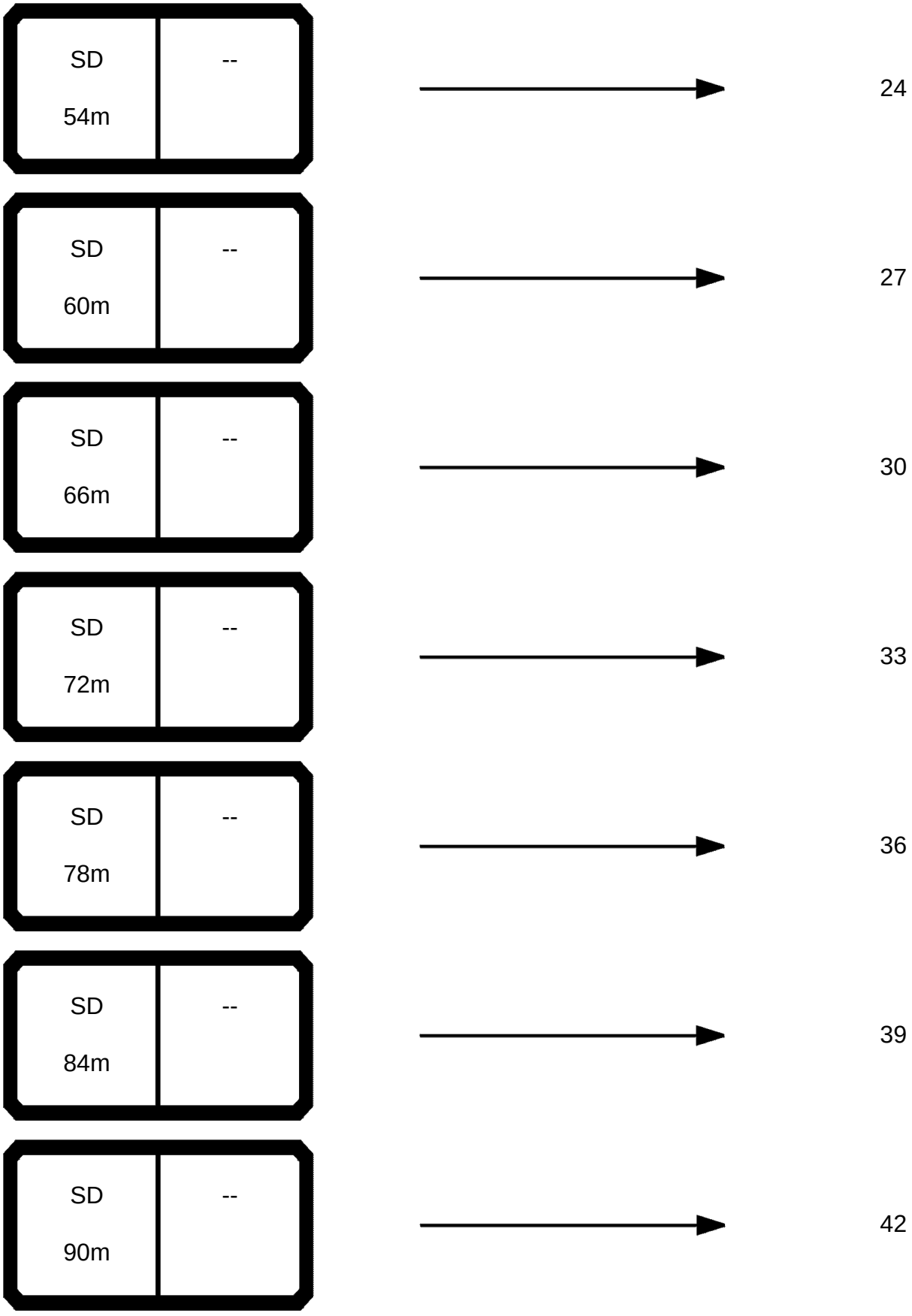
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24
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60m
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27
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66m
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72m
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33
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78m
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36
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84m
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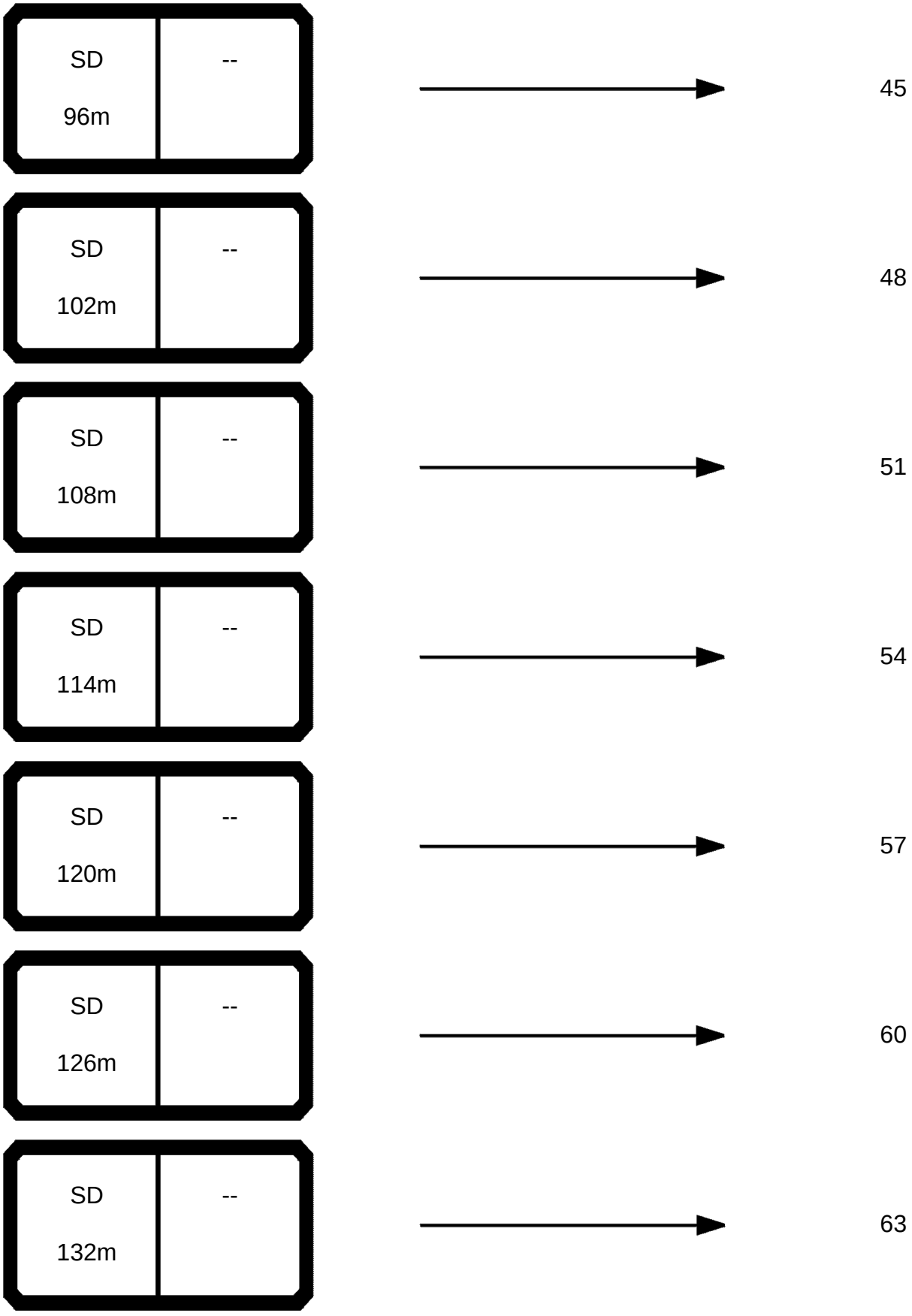
39
SD
90m
--
42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45
SD
102m
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48
SD
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114m
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54
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120m
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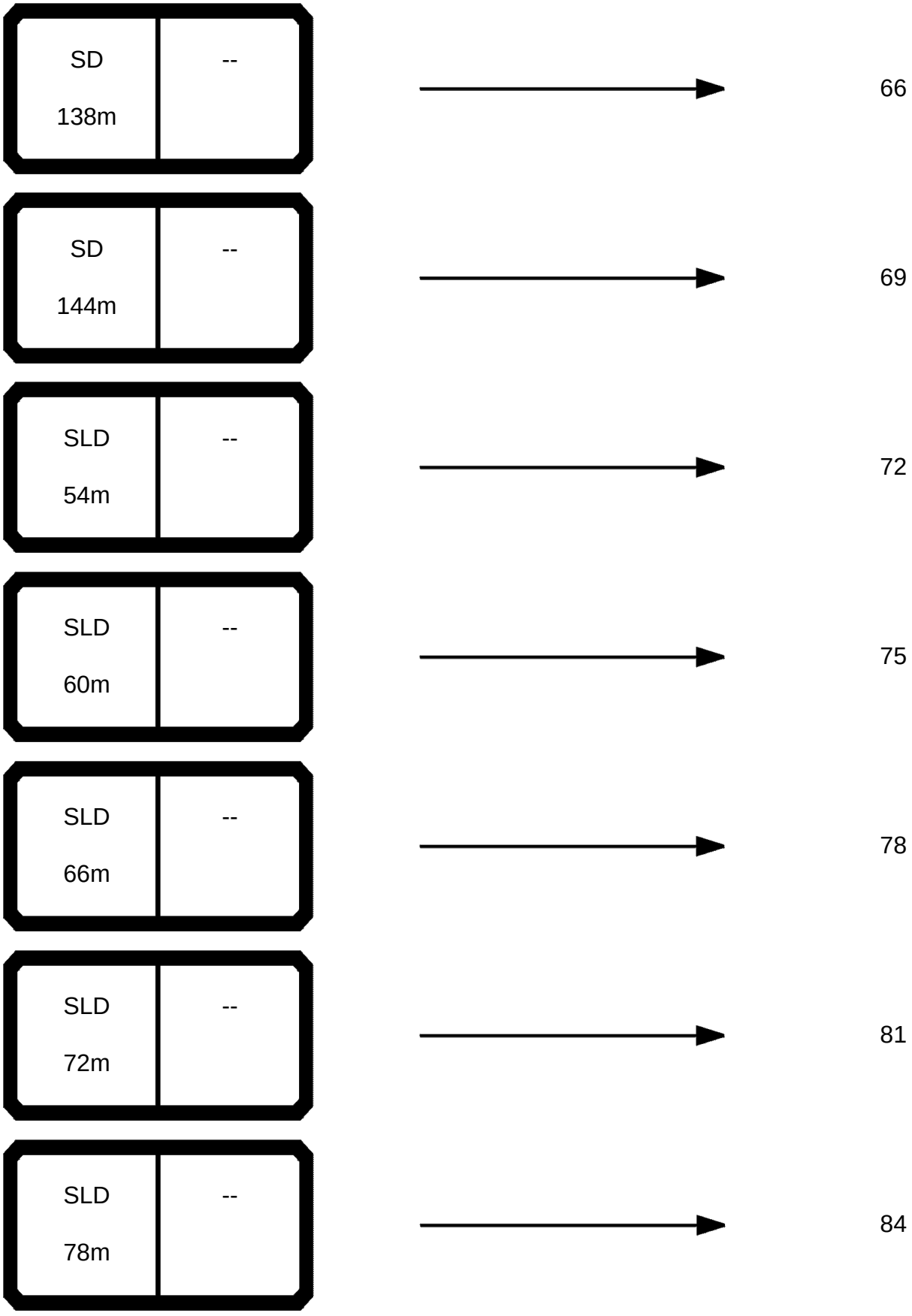
57
SD
126m
--
60
SD
132m
--
63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SD
144m
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69
SLD
54m
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66m
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78
SLD
72m
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81
SLD
78m
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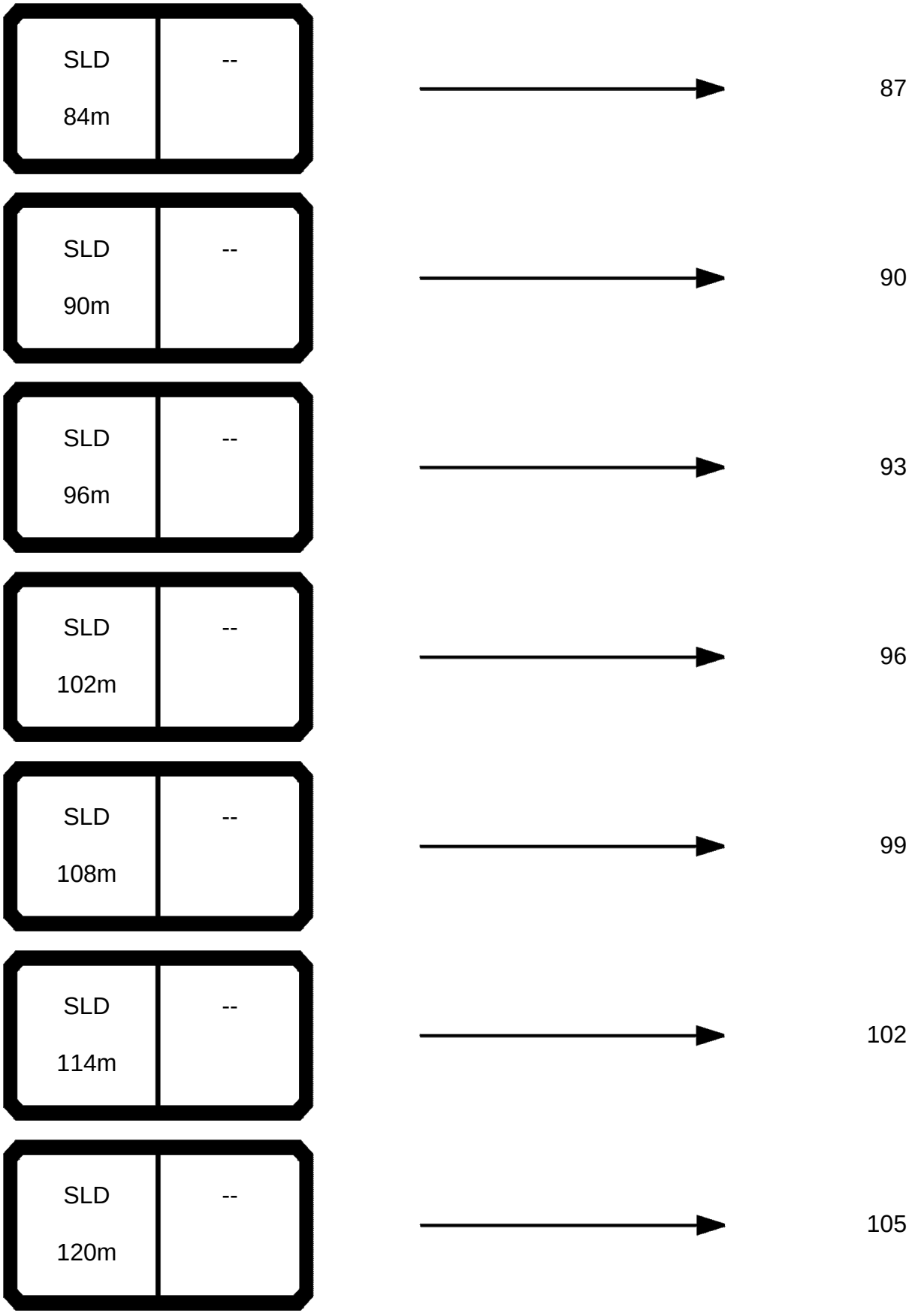
84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114m
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SLD
120m
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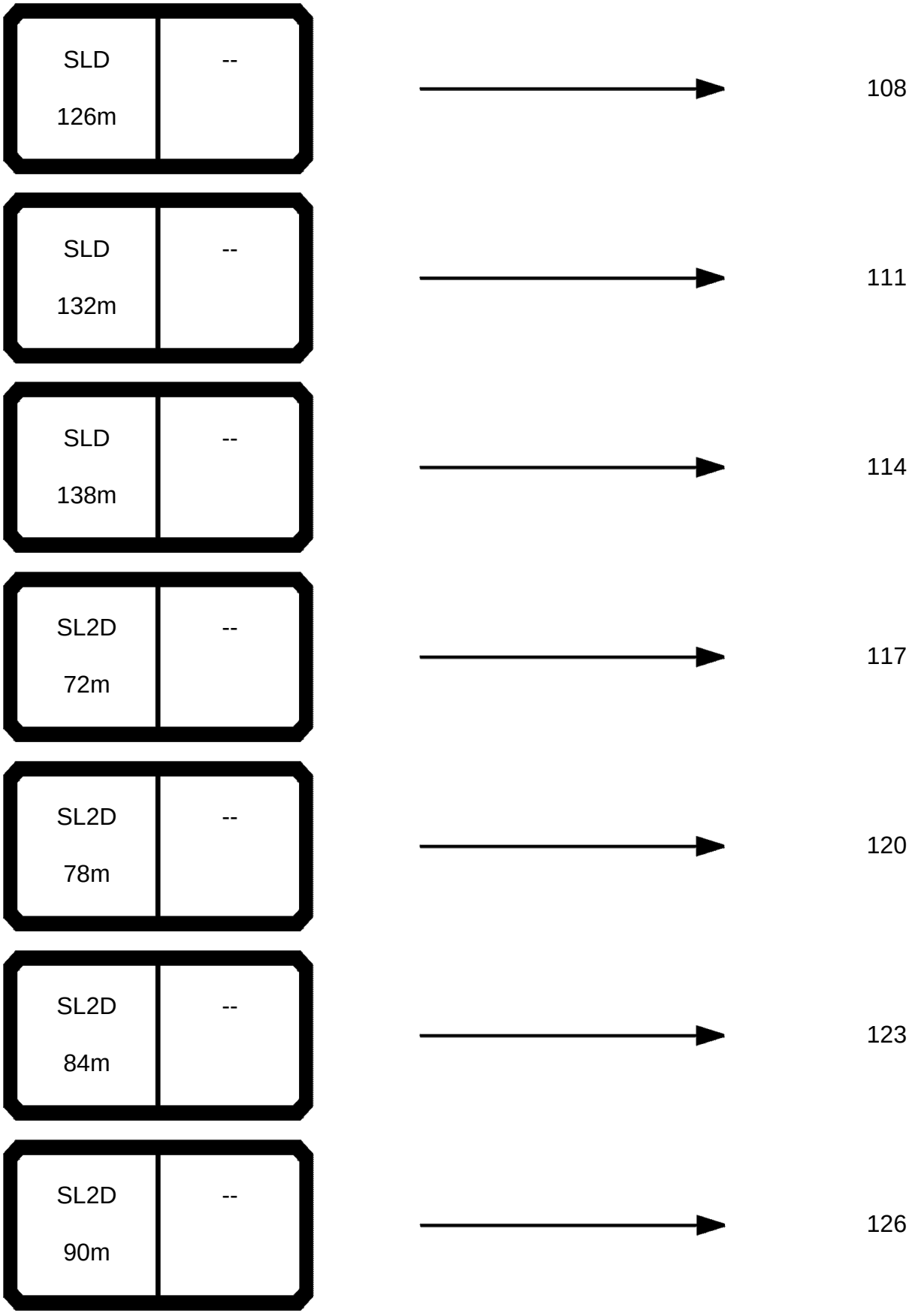
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SL2D
84m
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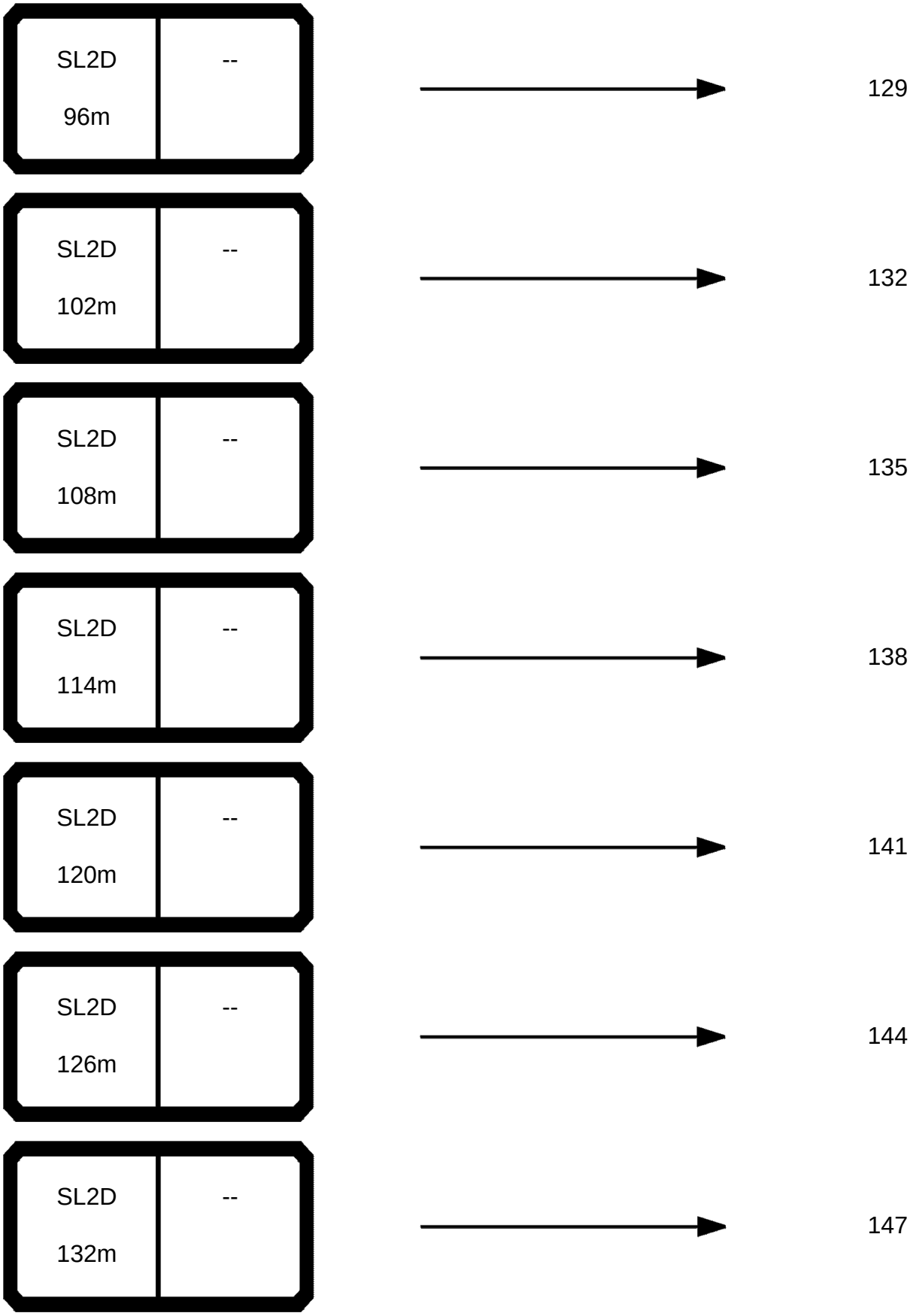
123
SL2D
90m
--
126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102m
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SL2D
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SL2D
126m
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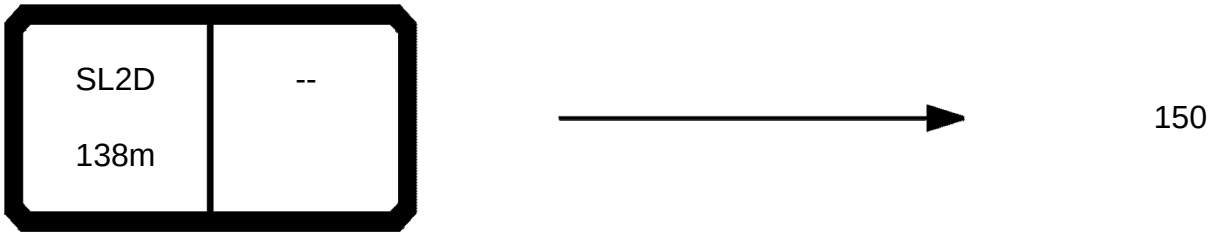
144
SL2D
132m
--
147


SL2D
138m
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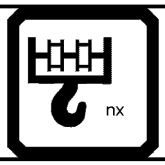	 t
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9	153,2
10	169,0
11	184,5
12	199,9
13	214,9
14	229,8
15	244,4
16	258,8
17	273,0
18	287,0
19	300,8
20	314,3
21	327,7
22	340,8
23	353,8
24	366,6
25	379,1
26	391,5
27	403,7
28	415,7
29	427,6
30	439,2
31	450,7
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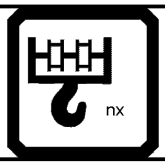	 t
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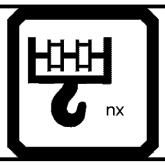	 t
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5	60,9
6	72,5
7	84,0
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9	106,4
10	117,4
11	128,2
12	138,8
13	149,3
14	159,6
15	169,7
16	179,7
17	189,6
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23	245,7
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25	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
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39	372,6
40	379,6

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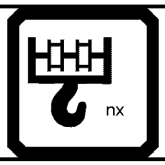	 t
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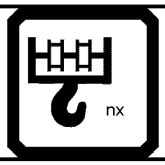	 t
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7	107,5
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12	177,6
13	191,0
14	204,2
15	217,2
16	230,1
17	242,7
18	255,1
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20	279,4
21	291,3
22	303,0
23	314,5
24	325,8
25	337,0
26	348,0
27	358,9

SA	--
10.5m	(SA)

074607 *** 300 22.01

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V181 0001

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3,5	47,0													
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8,5	21,5													
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10,5	15,0													
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m/s	14,3													

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	10.5m	(SA)	t	10.0 m	360°		

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CODE >8476<

V181 7200

m	**36,0**	**36,0**												
7,0	489,0	492,0												
8,0	424,0	427,0												
9,0	374,0	376,0												
10,0	328,0	330,0												
11,0	296,0	298,0												
12,0	267,0	269,0												
14,0	224,0	226,0												
16,0	190,0	191,0												
18,0	165,0	166,0												
20,0	143,0	145,0												
22,0	127,0	129,0												
24,0	114,0	115,0												
26,0	102,0	103,0												
28,0	93,0	94,0												
30,0	84,0	85,0												
32,0	77,0	78,0												
34,0	71,0	72,0												
36,0	66,0	67,0												
*** n ***	35	35												
yy	13,0	15,0												
m/s	12,8	12,8												

	SD	--	150 t	14.0 x 14.0 m	zz t yy m		
	36m						

ISO DIN

SD	--
36m	

074607 *** 252 22.50

m > < t

CODE >8475<

V181 7200

m	36,0	36,0												
7,0	499,0	502,0												
8,0	437,0	443,0												
9,0	387,0	392,0												
10,0	340,0	345,0												
11,0	307,0	311,0												
12,0	277,0	281,0												
14,0	232,0	235,0												
16,0	196,0	199,0												
18,0	171,0	173,0												
20,0	149,0	151,0												
22,0	133,0	134,0												
24,0	119,0	120,0												
26,0	106,0	108,0												
28,0	97,0	98,0												
30,0	87,0	89,0												
32,0	81,0	82,0												
34,0	74,0	75,0												
36,0	69,0	70,0												
*** n ***	36	36												
yy	13,0	15,0												
m/s	12,8	12,8												

	SD	--	170 t	14.0 x 14.0 m	zz t yy m		
	36m						

ISO DIN

SD	--
36m	

074607 *** 253 22.50

m > < t

CODE >8474<

V181 7200

m	36,0	36,0												
8,0	451,0	454,0												
9,0	401,0	403,0												
10,0	355,0	357,0												
11,0	318,0	320,0												
12,0	288,0	290,0												
14,0	241,0	243,0												
16,0	205,0	207,0												
18,0	177,0	179,0												
20,0	155,0	157,0												
22,0	137,0	139,0												
24,0	124,0	125,0												
26,0	111,0	111,0												
28,0	101,0	102,0												
30,0	92,0	92,0												
32,0	84,0	85,0												
34,0	77,0	78,0												
36,0	72,0	72,0												
*** n ***	32	32												
yy	13,0	15,0												
m/s	12,8	12,8												

	SD	--	190 t	14.0 x 14.0 m	zz t yy m		
	36m						

ISO DIN

SD	--
42m	

074607 *** 251 22.50

m > < t

CODE >8479<

V181 7300

m	42,0	42,0	42,0											
8,0	422,0	428,0	433,0											
9,0	367,0	371,0	378,0											
10,0	328,0	332,0	338,0											
11,0	291,0	295,0	300,0											
12,0	263,0	267,0	271,0											
14,0	219,0	221,0	225,0											
16,0	188,0	190,0	194,0											
18,0	161,0	163,0	166,0											
20,0	140,0	142,0	145,0											
22,0	124,0	126,0	129,0											
24,0	109,0	111,0	113,0											
26,0	99,0	100,0	103,0											
28,0	89,0	90,0	92,0											
30,0	81,0	81,0	83,0											
32,0	74,0	75,0	77,0											
34,0	67,0	68,0	70,0											
36,0	62,0	63,0	64,0											
38,0	57,0	58,0	60,0											
40,0	53,0	54,0	55,0											
*** n ***	29	30	30											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	150 t	14.0 x 14.0 m	zz t yy m		
	42m						

ISO DIN

SD	--
42m	

074607 *** 252 22.50

m > < t

CODE >8478<

V181 7300

m	42,0	42,0	42,0											
8,0	436,0	438,0	443,0											
9,0	381,0	385,0	390,0											
10,0	340,0	344,0	350,0											
11,0	303,0	306,0	311,0											
12,0	274,0	276,0	281,0											
14,0	227,0	230,0	233,0											
16,0	195,0	198,0	200,0											
18,0	167,0	170,0	172,0											
20,0	146,0	148,0	150,0											
22,0	129,0	131,0	133,0											
24,0	114,0	115,0	117,0											
26,0	103,0	105,0	107,0											
28,0	93,0	94,0	96,0											
30,0	84,0	85,0	87,0											
32,0	77,0	78,0	80,0											
34,0	70,0	71,0	73,0											
36,0	65,0	66,0	67,0											
38,0	60,0	61,0	62,0											
40,0	55,0	56,0	58,0											
*** n ***	30	30	31											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	170 t	14.0 x 14.0 m	zz t yy m		
	42m						

ISO DIN

SD	--
42m	

074607 *** 253 22.50

m > < t

CODE >8477<

V181 7300

m	42,0	42,0	42,0											
8,0	446,0	449,0	454,0											
9,0	396,0	399,0	405,0											
10,0	354,0	357,0	363,0											
11,0	316,0	319,0	325,0											
12,0	284,0	286,0	292,0											
14,0	237,0	239,0	243,0											
16,0	203,0	205,0	209,0											
18,0	175,0	177,0	180,0											
20,0	152,0	154,0	157,0											
22,0	136,0	137,0	139,0											
24,0	119,0	120,0	122,0											
26,0	108,0	109,0	111,0											
28,0	97,0	98,0	100,0											
30,0	88,0	89,0	90,0											
32,0	81,0	82,0	83,0											
34,0	74,0	75,0	76,0											
36,0	68,0	69,0	70,0											
38,0	63,0	64,0	65,0											
40,0	58,0	59,0	60,0											
*** n ***	31	31	32											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	190 t	14.0 x 14.0 m	zz t yy m		
	42m						

ISO DIN

SD	--
48m	

074607 *** 251 22.50

m > < t

CODE >8482<

V181 7400

m	48,0	48,0	48,0											
9,0	368,0	372,0	379,0											
10,0	322,0	326,0	332,0											
11,0	292,0	295,0	301,0											
12,0	262,0	264,0	270,0											
14,0	219,0	221,0	225,0											
16,0	183,0	184,0	188,0											
18,0	161,0	163,0	166,0											
20,0	139,0	142,0	145,0											
22,0	122,0	124,0	127,0											
24,0	109,0	111,0	114,0											
26,0	97,0	98,0	101,0											
28,0	87,0	89,0	91,0											
30,0	79,0	81,0	83,0											
32,0	72,0	73,0	75,0											
34,0	65,0	66,0	68,0											
36,0	60,0	61,0	63,0											
38,0	55,0	56,0	57,0											
40,0	50,0	51,0	52,0											
44,0	43,5	44,0	45,5											
48,0	38,0	38,5	40,0											
*** n ***	25	25	25											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	150 t	14.0 x 14.0 m	yy m zz t		
	48m						

ISO DIN

SD	--
48m	

074607 *** 252 22.50

m > < t

CODE >8481<

V181 7400

m	48,0	48,0	48,0											
9,0	382,0	386,0	392,0											
10,0	334,0	338,0	343,0											
11,0	303,0	307,0	312,0											
12,0	272,0	275,0	280,0											
14,0	227,0	230,0	235,0											
16,0	189,0	192,0	196,0											
18,0	167,0	170,0	173,0											
20,0	145,0	147,0	150,0											
22,0	127,0	129,0	131,0											
24,0	114,0	116,0	118,0											
26,0	101,0	103,0	104,0											
28,0	91,0	93,0	94,0											
30,0	83,0	85,0	86,0											
32,0	75,0	76,0	78,0											
34,0	68,0	69,0	71,0											
36,0	63,0	64,0	66,0											
38,0	58,0	59,0	60,0											
40,0	53,0	54,0	55,0											
44,0	45,5	46,5	47,5											
48,0	40,0	40,5	42,0											
*** n ***	26	26	27											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	170 t	14.0 x 14.0 m	zz t yy m		
	48m						

ISO DIN

SD	--
48m	

074607 *** 253 22.50

m > < t

CODE >8480<

V181 7400

m	48,0	48,0	48,0											
9,0	396,0	399,0	404,0											
10,0	349,0	352,0	358,0											
11,0	315,0	318,0	323,0											
12,0	284,0	287,0	291,0											
14,0	236,0	239,0	242,0											
16,0	198,0	200,0	204,0											
18,0	174,0	176,0	179,0											
20,0	151,0	154,0	157,0											
22,0	132,0	134,0	137,0											
24,0	119,0	121,0	123,0											
26,0	106,0	107,0	110,0											
28,0	96,0	97,0	99,0											
30,0	87,0	88,0	90,0											
32,0	79,0	80,0	81,0											
34,0	72,0	73,0	74,0											
36,0	66,0	67,0	68,0											
38,0	61,0	62,0	63,0											
40,0	55,0	56,0	58,0											
44,0	48,0	48,5	50,0											
48,0	42,0	42,5	44,0											
*** n ***	27	27	28											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	190 t	14.0 x 14.0 m	zz t yy m		
	48m						

ISO DIN

SD	--
54m	

074607 *** 251 22.50

m > < t

CODE >8485<

V181 7500

m	54,0	54,0	54,0											
9,0	363,0	365,0	372,0											
10,0	322,0	326,0	331,0											
11,0	285,0	289,0	293,0											
12,0	260,0	264,0	267,0											
14,0	212,0	216,0	219,0											
16,0	183,0	185,0	189,0											
18,0	156,0	157,0	160,0											
20,0	138,0	140,0	143,0											
22,0	120,0	122,0	125,0											
24,0	105,0	107,0	109,0											
26,0	95,0	97,0	99,0											
28,0	85,0	86,0	88,0											
30,0	75,0	77,0	79,0											
32,0	69,0	70,0	72,0											
34,0	63,0	64,0	66,0											
36,0	56,0	57,0	59,0											
38,0	52,0	53,0	54,0											
40,0	47,5	48,5	50,0											
44,0	39,5	40,0	41,5											
48,0	34,0	34,5	35,5											
52,0	29,0	29,7	30,5											
*** n ***	24	24	25											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	150 t	14.0 x 14.0 m	yy m zz t		
	54m						

ISO DIN

SD	--
54m	

074607 *** 252 22.50

m > < t

CODE >8484<

V181 7500

m	54,0	54,0	54,0											
9,0	375,0	381,0	385,0											
10,0	335,0	338,0	343,0											
11,0	297,0	299,0	305,0											
12,0	271,0	273,0	278,0											
14,0	222,0	223,0	228,0											
16,0	190,0	192,0	196,0											
18,0	161,0	164,0	166,0											
20,0	143,0	145,0	148,0											
22,0	126,0	127,0	129,0											
24,0	110,0	111,0	113,0											
26,0	99,0	101,0	103,0											
28,0	89,0	90,0	92,0											
30,0	79,0	81,0	82,0											
32,0	73,0	74,0	75,0											
34,0	66,0	67,0	68,0											
36,0	59,0	60,0	62,0											
38,0	54,0	55,0	57,0											
40,0	50,0	51,0	52,0											
44,0	41,5	42,5	43,5											
48,0	36,0	36,5	37,5											
52,0	31,0	31,5	32,5											
*** n ***	25	26	26											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	170 t	14.0 x 14.0 m	zz t yy m		
	54m						

ISO DIN

SD	--
54m	

074607 *** 253 22.50

m > < t

CODE >8483<

V181 7500

m	54,0	54,0	54,0											
10,0	348,0	351,0	357,0											
11,0	306,0	311,0	314,0											
12,0	280,0	284,0	288,0											
14,0	229,0	232,0	237,0											
16,0	198,0	200,0	204,0											
18,0	168,0	169,0	173,0											
20,0	149,0	151,0	154,0											
22,0	131,0	133,0	136,0											
24,0	114,0	116,0	119,0											
26,0	104,0	105,0	107,0											
28,0	93,0	94,0	96,0											
30,0	83,0	84,0	86,0											
32,0	76,0	77,0	79,0											
34,0	69,0	70,0	72,0											
36,0	63,0	63,0	65,0											
38,0	57,0	58,0	59,0											
40,0	53,0	54,0	55,0											
44,0	44,0	45,0	46,0											
48,0	38,0	38,5	40,0											
52,0	32,5	33,5	34,5											
*** n ***	23	23	24											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	190 t	14.0 x 14.0 m	zz t yy m		
	54m						

ISO DIN

SD	--
60m	

074607 *** 251 22.50

m > < t

CODE >8488<

V181 7600

m	60,0	60,0	60,0											
10,0	320,0	322,0	328,0											
11,0	285,0	288,0	293,0											
12,0	256,0	258,0	263,0											
14,0	214,0	216,0	220,0											
16,0	181,0	183,0	186,0											
18,0	155,0	157,0	160,0											
20,0	134,0	136,0	139,0											
22,0	119,0	121,0	124,0											
24,0	105,0	107,0	109,0											
26,0	92,0	93,0	96,0											
28,0	83,0	85,0	87,0											
30,0	75,0	76,0	78,0											
32,0	67,0	68,0	69,0											
34,0	61,0	62,0	63,0											
36,0	55,0	56,0	58,0											
38,0	50,0	51,0	53,0											
40,0	45,0	46,0	47,0											
44,0	38,0	38,5	40,0											
48,0	31,5	32,0	33,0											
52,0	26,5	27,1	28,2											
56,0	22,1	22,8	23,7											
60,0	19,7	20,1	21,1											
*** n ***	21	21	22											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	150 t	14.0 x 14.0 m	yy m zz t		
	60m						

ISO DIN

SD	--
60m	

074607 *** 252 22.50

m > < t

CODE >8487<

V181 7600

m	60,0	60,0	60,0											
10,0	331,0	335,0	342,0											
11,0	297,0	300,0	306,0											
12,0	267,0	269,0	274,0											
14,0	222,0	225,0	228,0											
16,0	188,0	190,0	193,0											
18,0	161,0	163,0	167,0											
20,0	140,0	141,0	145,0											
22,0	125,0	126,0	129,0											
24,0	110,0	111,0	114,0											
26,0	96,0	97,0	99,0											
28,0	87,0	88,0	90,0											
30,0	79,0	80,0	82,0											
32,0	70,0	71,0	73,0											
34,0	64,0	65,0	66,0											
36,0	58,0	59,0	61,0											
38,0	53,0	54,0	55,0											
40,0	47,5	48,5	50,0											
44,0	40,0	41,0	42,0											
48,0	33,5	34,0	35,0											
52,0	28,2	28,9	30,0											
56,0	23,7	24,4	25,3											
60,0	21,3	21,9	22,8											
*** n ***	22	22	23											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	170 t	14.0 x 14.0 m	zz t yy m		
	60m						

ISO DIN

SD	--
60m	

074607 *** 253 22.50

m > < t

CODE >8486<

V181 7600

m	60,0	60,0	60,0											
10,0	344,0	346,0	352,0											
11,0	308,0	312,0	317,0											
12,0	275,0	279,0	283,0											
14,0	231,0	234,0	238,0											
16,0	195,0	197,0	201,0											
18,0	169,0	170,0	174,0											
20,0	146,0	147,0	150,0											
22,0	131,0	132,0	135,0											
24,0	115,0	116,0	119,0											
26,0	101,0	102,0	104,0											
28,0	92,0	93,0	95,0											
30,0	83,0	84,0	86,0											
32,0	74,0	75,0	76,0											
34,0	67,0	68,0	69,0											
36,0	61,0	62,0	64,0											
38,0	56,0	57,0	58,0											
40,0	50,0	51,0	52,0											
44,0	42,5	43,5	44,5											
48,0	35,5	36,0	37,5											
52,0	30,0	31,0	32,0											
56,0	25,4	26,1	27,0											
60,0	23,1	23,7	24,4											
*** n ***	23	23	23											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	190 t	14.0 x 14.0 m	zz t yy m		
	60m						

ISO DIN

SD	--
66m	

074607 *** 251 22.50

m > < t

CODE >8491<

V181 7700

m	66,0	66,0	66,0											
11,0	285,0	289,0	293,0											
12,0	256,0	258,0	263,0											
14,0	214,0	216,0	220,0											
16,0	177,0	180,0	182,0											
18,0	155,0	158,0	160,0											
20,0	133,0	135,0	138,0											
22,0	117,0	119,0	122,0											
24,0	105,0	107,0	109,0											
26,0	93,0	95,0	97,0											
28,0	81,0	83,0	84,0											
30,0	74,0	75,0	77,0											
32,0	67,0	68,0	70,0											
34,0	60,0	61,0	63,0											
36,0	54,0	55,0	56,0											
38,0	49,5	50,0	52,0											
40,0	45,0	46,0	47,0											
44,0	36,0	37,0	38,0											
48,0	30,5	31,0	32,5											
52,0	24,7	25,6	26,6											
56,0	20,5	21,3	22,2											
60,0	17,1	17,8	18,6											
64,0	14,6	15,2	15,8											
*** n ***	18	19	19											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	150 t	14.0 x 14.0 m	zz t yy m		
	66m						

ISO DIN

SD	--
66m	

074607 *** 252 22.50

m > < t

CODE >8490<

V181 7700

m	66,0	66,0	66,0											
11,0	296,0	299,0	305,0											
12,0	265,0	269,0	274,0											
14,0	222,0	225,0	229,0											
16,0	185,0	186,0	190,0											
18,0	162,0	164,0	167,0											
20,0	139,0	141,0	144,0											
22,0	123,0	125,0	127,0											
24,0	110,0	112,0	114,0											
26,0	97,0	99,0	101,0											
28,0	85,0	87,0	89,0											
30,0	78,0	79,0	81,0											
32,0	70,0	72,0	73,0											
34,0	63,0	64,0	66,0											
36,0	56,0	57,0	59,0											
38,0	52,0	53,0	54,0											
40,0	47,5	48,5	49,5											
44,0	38,5	39,0	40,5											
48,0	32,5	33,0	34,5											
52,0	26,7	27,4	28,4											
56,0	22,4	23,0	23,9											
60,0	19,0	19,6	20,3											
64,0	16,4	16,9	17,5											
*** n ***	19	19	20											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	170 t	14.0 x 14.0 m	zz t yy m		
	66m						

ISO DIN

SD	--
66m	

074607 *** 253 22.50

m > < t

CODE >8489<

V181 7700

m	66,0	66,0	66,0											
11,0	307,0	311,0	316,0											
12,0	277,0	279,0	285,0											
14,0	231,0	233,0	237,0											
16,0	192,0	195,0	198,0											
18,0	168,0	170,0	173,0											
20,0	146,0	147,0	150,0											
22,0	128,0	129,0	132,0											
24,0	115,0	116,0	119,0											
26,0	102,0	103,0	105,0											
28,0	89,0	90,0	92,0											
30,0	82,0	83,0	84,0											
32,0	74,0	75,0	77,0											
34,0	67,0	67,0	69,0											
36,0	59,0	60,0	62,0											
38,0	55,0	56,0	57,0											
40,0	50,0	51,0	52,0											
44,0	41,0	41,5	43,0											
48,0	34,5	35,5	36,5											
52,0	28,6	29,3	30,5											
56,0	24,2	24,7	25,6											
60,0	20,8	21,2	21,9											
64,0	17,9	18,4	19,1											
*** n ***	20	20	21											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	190	14.0 x			
	66m		t	14.0	zz t		
				m	yy m		

ISO DIN

SD	--
72m	

074607 *** 251 22.50

m > < t

CODE >8494<

V181 7800

m	72,0	72,0	72,0											
11,0	280,0	284,0	290,0											
12,0	255,0	258,0	263,0											
14,0	210,0	213,0	218,0											
16,0	179,0	181,0	185,0											
18,0	152,0	155,0	158,0											
20,0	134,0	136,0	139,0											
22,0	115,0	117,0	120,0											
24,0	103,0	105,0	108,0											
26,0	93,0	94,0	97,0											
28,0	82,0	84,0	86,0											
30,0	72,0	73,0	75,0											
32,0	66,0	67,0	69,0											
34,0	60,0	61,0	62,0											
36,0	54,0	55,0	56,0											
38,0	47,5	48,5	50,0											
40,0	43,5	44,5	45,5											
44,0	36,0	37,0	38,0											
48,0	28,6	29,3	30,5											
52,0	23,8	24,5	25,5											
56,0	19,1	19,8	20,5											
60,0	15,4	16,0	16,7											
64,0	12,9	13,4	14,1											
68,0	10,5	10,9	11,7											
72,0	9,3	9,7	10,3											
*** n ***	18	18	19											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	150 t	14.0 x 14.0 m	zz t yy m		
	72m						

ISO DIN

SD	--
72m	

074607 *** 252 22.50

m > < t

CODE >8493<

V181 7800

m	72,0	72,0	72,0											
11,0	292,0	294,0	300,0											
12,0	265,0	268,0	273,0											
14,0	219,0	222,0	225,0											
16,0	186,0	189,0	192,0											
18,0	159,0	162,0	164,0											
20,0	140,0	142,0	144,0											
22,0	121,0	122,0	124,0											
24,0	108,0	109,0	112,0											
26,0	97,0	98,0	101,0											
28,0	86,0	88,0	90,0											
30,0	75,0	77,0	79,0											
32,0	69,0	70,0	72,0											
34,0	63,0	64,0	66,0											
36,0	57,0	58,0	59,0											
38,0	50,0	51,0	53,0											
40,0	46,0	47,0	48,0											
44,0	38,0	39,0	40,5											
48,0	30,5	31,5	32,5											
52,0	25,8	26,4	27,4											
56,0	21,1	21,6	22,5											
60,0	17,4	17,7	18,6											
64,0	14,6	15,0	15,7											
68,0	12,1	12,5	13,1											
72,0	10,8	11,1	11,8											
*** n ***	19	19	19											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	170	14.0 x			
	72m		t	14.0	zz t		
				m	yy m		

ISO DIN

SD	--
72m	

074607 *** 253 22.50

m > < t

CODE >8492<

V181 7800

m	72,0	72,0	72,0											
11,0	301,0	306,0	311,0											
12,0	275,0	279,0	284,0											
14,0	228,0	230,0	234,0											
16,0	194,0	197,0	200,0											
18,0	165,0	167,0	171,0											
20,0	146,0	148,0	151,0											
22,0	127,0	128,0	131,0											
24,0	113,0	114,0	117,0											
26,0	102,0	103,0	105,0											
28,0	91,0	92,0	94,0											
30,0	80,0	81,0	82,0											
32,0	73,0	73,0	75,0											
34,0	66,0	67,0	69,0											
36,0	60,0	61,0	62,0											
38,0	53,0	54,0	56,0											
40,0	48,5	49,5	51,0											
44,0	40,5	41,5	42,5											
48,0	32,5	33,5	34,5											
52,0	27,7	28,4	29,4											
56,0	23,0	23,6	24,5											
60,0	19,1	19,6	20,5											
64,0	16,3	16,8	17,5											
68,0	13,8	14,2	14,8											
72,0	12,3	12,7	13,2											
*** n ***	20	20	20											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	190 t	14.0 x 14.0 m	yy m zz t		
	72m						

ISO DIN

SD	--
78m	

074607 *** 251 22.50

m > < t

CODE >8497<

V181 7900

m	78,0	78,0	78,0											
12,0	253,0	257,0	262,0											
14,0	207,0	211,0	215,0											
16,0	179,0	182,0	185,0											
18,0	152,0	153,0	157,0											
20,0	133,0	135,0	138,0											
22,0	117,0	119,0	122,0											
24,0	101,0	103,0	105,0											
26,0	92,0	94,0	96,0											
28,0	83,0	84,0	87,0											
30,0	74,0	75,0	77,0											
32,0	65,0	66,0	68,0											
34,0	59,0	60,0	62,0											
36,0	54,0	55,0	56,0											
38,0	48,5	49,5	51,0											
40,0	43,5	44,5	45,5											
44,0	35,5	36,5	37,5											
48,0	29,0	29,8	31,0											
52,0	22,7	23,4	24,5											
56,0	19,1	19,7	20,7											
60,0	15,6	15,9	16,8											
64,0	12,4	12,7	13,5											
68,0	10,0	10,4	11,2											
72,0	7,7	8,2	8,9											
76,0	6,2	6,5	7,3											
*** n ***	16	16	17											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	150 t	14.0 x 14.0 m	yy m zz t		
	78m						

ISO DIN

SD	--
78m	

074607 *** 252 22.50

m > < t

CODE >8496<

V181 7900

m	78,0	78,0	78,0											
12,0	264,0	266,0	272,0											
14,0	217,0	220,0	223,0											
16,0	186,0	189,0	192,0											
18,0	157,0	160,0	163,0											
20,0	139,0	141,0	144,0											
22,0	122,0	124,0	127,0											
24,0	106,0	107,0	109,0											
26,0	96,0	97,0	100,0											
28,0	87,0	88,0	90,0											
30,0	78,0	79,0	81,0											
32,0	68,0	69,0	71,0											
34,0	62,0	63,0	65,0											
36,0	57,0	58,0	59,0											
38,0	51,0	52,0	54,0											
40,0	46,0	47,0	48,0											
44,0	38,0	38,5	40,0											
48,0	31,0	32,0	33,0											
52,0	24,5	25,2	26,5											
56,0	20,8	21,5	22,6											
60,0	17,2	17,7	18,7											
64,0	14,0	14,4	15,2											
68,0	11,7	12,1	12,7											
72,0	9,4	9,7	10,3											
76,0	7,7	7,9	8,7											
*** n ***	17	17	17											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	170 t	14.0 x 14.0 m	yy m zz t		
	78m						

ISO DIN

SD	--
78m	

074607 *** 253 22.50

m > < t

CODE >8495<

V181 7900

m	78,0	78,0	78,0											
12,0	273,0	276,0	281,0											
14,0	226,0	229,0	233,0											
16,0	194,0	197,0	201,0											
18,0	165,0	168,0	171,0											
20,0	145,0	147,0	150,0											
22,0	128,0	130,0	133,0											
24,0	111,0	112,0	115,0											
26,0	100,0	102,0	104,0											
28,0	91,0	92,0	95,0											
30,0	81,0	83,0	85,0											
32,0	72,0	73,0	75,0											
34,0	65,0	66,0	68,0											
36,0	60,0	61,0	62,0											
38,0	54,0	55,0	57,0											
40,0	48,5	49,5	51,0											
44,0	40,0	41,0	42,0											
48,0	33,5	34,0	35,0											
52,0	26,6	27,3	28,3											
56,0	22,8	23,4	24,3											
60,0	19,1	19,6	20,3											
64,0	15,7	16,1	16,7											
68,0	13,2	13,7	14,3											
72,0	10,7	11,2	11,9											
76,0	9,0	9,4	10,0											
*** n ***	17	18	18											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	190 t	14.0 x 14.0 m	yy m zz t		
	78m						

ISO DIN

SD	--
84m	

074607 *** 251 22.50

m > < t

CODE >8500<

V181 7A00

m	84,0	84,0	84,0											
12,0	246,0	249,0	253,0											
14,0	207,0	209,0	213,0											
16,0	175,0	177,0	180,0											
18,0	150,0	152,0	156,0											
20,0	128,0	130,0	133,0											
22,0	114,0	116,0	119,0											
24,0	100,0	102,0	105,0											
26,0	88,0	90,0	92,0											
28,0	80,0	82,0	84,0											
30,0	72,0	74,0	75,0											
32,0	64,0	66,0	67,0											
34,0	56,0	58,0	59,0											
36,0	51,0	52,0	54,0											
38,0	46,5	47,5	49,0											
40,0	42,0	43,0	44,5											
44,0	33,0	34,0	35,0											
48,0	27,3	28,0	29,1											
52,0	21,7	22,4	23,3											
56,0	16,5	17,1	17,8											
60,0	13,6	14,2	14,9											
64,0	10,6	11,2	11,9											
68,0	7,9	8,4	9,2											
72,0	6,1	6,5	7,2											
76,0			5,2											
*** n ***	16	16	16											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	150	14.0 x			
	84m		t	14.0	zz t		
				m	yy m		

ISO DIN

SD	--
84m	

074607 *** 252 22.50

m > < t

CODE >8499<

V181 7A00

m	84,0	84,0	84,0											
12,0	256,0	258,0	263,0											
14,0	215,0	217,0	222,0											
16,0	182,0	184,0	188,0											
18,0	157,0	159,0	162,0											
20,0	134,0	136,0	139,0											
22,0	120,0	121,0	124,0											
24,0	105,0	107,0	109,0											
26,0	92,0	93,0	95,0											
28,0	84,0	85,0	87,0											
30,0	76,0	77,0	79,0											
32,0	68,0	69,0	70,0											
34,0	59,0	61,0	62,0											
36,0	54,0	55,0	56,0											
38,0	49,0	50,0	52,0											
40,0	44,5	45,5	47,0											
44,0	35,5	36,0	37,5											
48,0	29,3	30,0	31,0											
52,0	23,6	24,4	25,2											
56,0	18,3	19,0	19,7											
60,0	15,3	15,9	16,6											
64,0	12,4	12,8	13,5											
68,0	9,6	10,0	10,5											
72,0	7,6	8,0	8,6											
76,0	5,6	6,0	6,6											
*** n ***	16	16	17											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	170 t	14.0 x 14.0 m	yy m zz t		
	84m						

ISO DIN

SD	--
84m	

074607 *** 253 22.50

m > < t

CODE >8498<

V181 7A00

m	**84,0**	**84,0**	**84,0**
14,0	224,0	226,0	231,0
16,0	189,0	191,0	195,0
18,0	164,0	165,0	169,0
20,0	140,0	141,0	144,0
22,0	125,0	127,0	129,0
24,0	110,0	112,0	114,0
26,0	96,0	98,0	100,0
28,0	88,0	89,0	91,0
30,0	79,0	81,0	83,0
32,0	71,0	72,0	74,0
34,0	63,0	64,0	66,0
36,0	57,0	58,0	59,0
38,0	52,0	53,0	54,0
40,0	47,0	48,0	49,5
44,0	37,5	38,5	40,0
48,0	31,5	32,0	33,5
52,0	25,8	26,4	27,3
56,0	20,4	20,8	21,5
60,0	17,2	17,6	18,4
64,0	14,1	14,5	15,3
68,0	11,1	11,5	12,3
72,0	9,1	9,4	10,2
76,0	7,0	7,4	8,0
80,0	5,3	5,7	6,3
84,0			5,3
*** n ***	14	14	15
yy	13,0	15,0	18,0
m/s	12,8	12,8	12,8

SD	--	190 t	14.0 x 14.0 m	zz t yy m
84m				

ISO DIN

SD	--
90m	

074607 *** 251 22.50

m > < t

CODE >8503<

V181 7B00

m	90,0	90,0	90,0											
14,0	204,0	206,0	210,0											
16,0	170,0	172,0	175,0											
18,0	149,0	150,0	154,0											
20,0	127,0	129,0	132,0											
22,0	111,0	114,0	116,0											
24,0	99,0	101,0	103,0											
26,0	87,0	88,0	90,0											
28,0	77,0	78,0	80,0											
30,0	70,0	71,0	73,0											
32,0	63,0	64,0	66,0											
34,0	56,0	57,0	59,0											
36,0	49,0	50,0	52,0											
38,0	44,0	45,0	46,5											
40,0	40,0	41,0	42,0											
44,0	31,5	32,5	34,0											
48,0	24,3	25,1	26,3											
52,0	19,9	20,6	21,6											
56,0	15,6	16,1	17,0											
60,0	11,6	12,0	12,7											
64,0	9,1	9,5	10,1											
68,0	6,6	6,9	7,5											
*** n ***	13	13	13											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	150 t	14.0 x 14.0 m	yy m zz t		
	90m						

ISO DIN

SD	--
90m	

074607 *** 252 22.50

m > < t

CODE >8502<

V181 7B00

m	90,0	90,0	90,0											
14,0	213,0	214,0	219,0											
16,0	178,0	179,0	183,0											
18,0	155,0	157,0	160,0											
20,0	133,0	134,0	137,0											
22,0	117,0	118,0	121,0											
24,0	104,0	105,0	107,0											
26,0	91,0	92,0	94,0											
28,0	80,0	82,0	84,0											
30,0	73,0	75,0	76,0											
32,0	66,0	67,0	69,0											
34,0	59,0	60,0	62,0											
36,0	52,0	53,0	54,0											
38,0	46,5	47,5	49,0											
40,0	42,5	43,5	44,5											
44,0	34,0	35,0	36,0											
48,0	26,3	27,1	28,3											
52,0	21,8	22,5	23,6											
56,0	17,3	17,9	18,9											
60,0	13,1	13,7	14,6											
64,0	10,5	11,0	11,9											
68,0	7,9	8,4	9,2											
72,0	5,4	5,7	6,5											
*** n ***	13	13	14											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	170 t	14.0 x 14.0 m	yy m zz t		
	90m						

ISO DIN

SD	--
90m	

074607 *** 253 22.50

m > < t

CODE >8501<

V181 7B00

m	90,0	90,0	90,0											
14,0	221,0	223,0	228,0											
16,0	184,0	187,0	191,0											
18,0	161,0	164,0	167,0											
20,0	139,0	141,0	144,0											
22,0	121,0	123,0	126,0											
24,0	108,0	110,0	113,0											
26,0	95,0	97,0	99,0											
28,0	84,0	86,0	88,0											
30,0	77,0	78,0	80,0											
32,0	70,0	71,0	73,0											
34,0	62,0	63,0	65,0											
36,0	55,0	56,0	58,0											
38,0	49,0	50,0	52,0											
40,0	45,0	46,0	47,5											
44,0	36,5	37,5	38,5											
48,0	28,4	29,2	30,5											
52,0	23,9	24,6	25,6											
56,0	19,4	20,0	20,8											
60,0	15,2	15,6	16,3											
64,0	12,5	12,9	13,6											
68,0	9,7	10,1	10,8											
72,0	7,0	7,4	8,0											
76,0	5,2	5,5	6,1											
*** n ***	14	14	14											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	190 t	14.0 x 14.0 m	yy m zz t		
	90m						

ISO DIN

SD	--
96m	

074607 *** 251 22.50

m > < t

CODE >8506<

V181 7C00

m	96,0	96,0	96,0											
14,0	200,0	204,0	207,0											
16,0	169,0	172,0	175,0											
18,0	146,0	148,0	151,0											
20,0	127,0	128,0	131,0											
22,0	108,0	109,0	112,0											
24,0	97,0	98,0	101,0											
26,0	86,0	87,0	90,0											
28,0	75,0	76,0	78,0											
30,0	67,0	68,0	70,0											
32,0	61,0	62,0	64,0											
34,0	55,0	56,0	58,0											
36,0	49,0	50,0	51,0											
38,0	43,0	43,5	45,0											
40,0	38,0	38,5	40,0											
44,0	30,5	31,0	32,5											
48,0	23,0	23,7	24,9											
52,0	17,4	18,0	19,1											
56,0	13,9	14,4	15,5											
60,0	10,4	10,9	11,8											
64,0	7,3	7,7	8,5											
68,0	5,1	5,5	6,3											
*** n ***	13	13	13											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	150 t	14.0 x 14.0 m	yy m zz t		
	96m						

ISO DIN

SD	--
96m	

074607 *** 252 22.50

m > < t

CODE >8505< V181 7C00

m	96,0	96,0	96,0											
14,0	208,0	211,0	215,0											
16,0	176,0	179,0	182,0											
18,0	152,0	155,0	157,0											
20,0	132,0	134,0	137,0											
22,0	113,0	115,0	117,0											
24,0	101,0	103,0	106,0											
26,0	90,0	92,0	94,0											
28,0	79,0	80,0	82,0											
30,0	71,0	72,0	74,0											
32,0	64,0	65,0	67,0											
34,0	58,0	59,0	61,0											
36,0	52,0	53,0	54,0											
38,0	45,5	46,5	48,0											
40,0	40,5	41,0	42,5											
44,0	33,0	33,5	35,0											
48,0	25,3	25,9	26,9											
52,0	19,5	20,1	21,0											
56,0	16,0	16,4	17,2											
60,0	12,4	12,8	13,5											
64,0	9,1	9,5	10,1											
68,0	6,8	7,2	7,8											
72,0			5,4											
*** n ***	13	13	14											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	170 t	14.0 x 14.0 m	zz t yy m		
	96m						

ISO DIN

SD	--
96m	

074607 *** 253 22.50

m > < t

CODE >8504<

V181 7C00

m	96,0	96,0	96,0											
14,0	216,0	219,0	223,0											
16,0	183,0	186,0	190,0											
18,0	158,0	160,0	164,0											
20,0	138,0	140,0	143,0											
22,0	118,0	120,0	123,0											
24,0	106,0	108,0	111,0											
26,0	95,0	96,0	99,0											
28,0	83,0	85,0	87,0											
30,0	74,0	75,0	77,0											
32,0	68,0	69,0	71,0											
34,0	61,0	62,0	64,0											
36,0	55,0	56,0	57,0											
38,0	48,5	49,5	51,0											
40,0	43,0	44,0	45,0											
44,0	35,0	36,0	37,0											
48,0	27,6	28,4	29,3											
52,0	21,6	22,3	23,1											
56,0	17,9	18,5	19,3											
60,0	14,2	14,6	15,5											
64,0	10,7	11,1	12,0											
68,0	8,4	8,7	9,5											
72,0	6,0	6,3	7,0											
*** n ***	14	14	14											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	190	14.0 x			
	96m		t	14.0	zz t		
				m	yy m		

ISO DIN

SD	--
102m	

074607 *** 251 22.50

m > < t

CODE >8509<

V181 7D00

m	102,0	102,0	102,0											
14,0	196,0	198,0	202,0											
16,0	167,0	170,0	173,0											
18,0	141,0	144,0	147,0											
20,0	124,0	127,0	130,0											
22,0	107,0	109,0	112,0											
24,0	94,0	96,0	98,0											
26,0	84,0	86,0	88,0											
28,0	74,0	76,0	78,0											
30,0	65,0	66,0	68,0											
32,0	58,0	60,0	61,0											
34,0	53,0	54,0	56,0											
36,0	47,5	48,5	50,0											
38,0	42,0	43,0	44,5											
40,0	36,0	37,5	38,5											
44,0	28,5	29,4	30,5											
48,0	22,3	23,2	24,2											
52,0	16,1	16,9	17,6											
56,0	12,2	12,8	13,6											
60,0	9,2	9,7	10,4											
64,0	6,1	6,5	7,3											
*** n ***	12	12	13											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	150 t	14.0 x 14.0 m	zz t yy m		
	102m						

ISO DIN

SD	--
102m	

074607 *** 252 22.50

m > < t

CODE >8508<

V181 7D00

m	102,0	102,0	102,0											
14,0	203,0	206,0	209,0											
16,0	174,0	177,0	180,0											
18,0	148,0	150,0	153,0											
20,0	130,0	132,0	135,0											
22,0	113,0	115,0	117,0											
24,0	99,0	100,0	102,0											
26,0	88,0	90,0	92,0											
28,0	78,0	80,0	81,0											
30,0	68,0	69,0	71,0											
32,0	61,0	63,0	65,0											
34,0	56,0	57,0	59,0											
36,0	50,0	51,0	53,0											
38,0	44,5	45,5	47,0											
40,0	39,0	40,0	41,5											
44,0	31,0	31,5	33,0											
48,0	24,7	25,3	26,6											
52,0	18,4	18,8	19,9											
56,0	14,3	14,7	15,7											
60,0	11,1	11,5	12,4											
64,0	7,8	8,2	9,1											
68,0	5,1	5,5	6,2											
*** n ***	13	13	13											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	170 t	14.0 x 14.0 m	zz t yy m		
	102m						

ISO DIN

SD	--
102m	

074607 *** 253 22.50

m > < t

CODE >8507<

V181 7D00

m	102,0	102,0	102,0											
16,0	182,0	184,0	185,0											
18,0	154,0	156,0	160,0											
20,0	136,0	138,0	141,0											
22,0	118,0	120,0	123,0											
24,0	103,0	105,0	107,0											
26,0	92,0	94,0	96,0											
28,0	82,0	84,0	86,0											
30,0	72,0	73,0	75,0											
32,0	65,0	66,0	68,0											
34,0	59,0	60,0	62,0											
36,0	53,0	54,0	56,0											
38,0	47,5	48,5	50,0											
40,0	42,0	43,0	44,0											
44,0	33,5	34,5	35,5											
48,0	27,0	27,8	28,8											
52,0	20,5	21,2	22,0											
56,0	16,1	16,7	17,5											
60,0	12,8	13,4	14,1											
64,0	9,5	10,0	10,7											
68,0	6,6	7,0	7,6											
72,0			5,5											
*** n ***	11	11	12											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	190	14.0 x			
	102m		t	14.0	zz t		
				m	yy m		

ISO DIN

SD	--
108m	

074607 *** 251 22.50

m > < t

CODE >8512<

V181 7E00

m	108,0	108,0	108,0											
16,0	166,0	168,0	170,0											
18,0	141,0	143,0	146,0											
20,0	124,0	126,0	128,0											
22,0	108,0	110,0	112,0											
24,0	93,0	94,0	97,0											
26,0	83,0	85,0	87,0											
28,0	74,0	76,0	78,0											
30,0	66,0	67,0	69,0											
32,0	57,0	58,0	60,0											
34,0	52,0	53,0	55,0											
36,0	47,0	48,0	49,5											
38,0	42,0	43,0	44,5											
40,0	37,0	38,0	39,5											
44,0	27,3	28,3	29,6											
48,0	22,1	22,9	24,1											
52,0	16,8	17,5	18,6											
56,0	11,6	12,1	13,0											
60,0	8,8	9,3	10,1											
64,0	6,0	6,5	7,2											
*** n ***	10	10	11											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	150 t	14.0 x 14.0 m	yy m zz t		
	108m						

ISO DIN

SD	--
108m	

074607 *** 252 22.50

m > < t

CODE >8511<

V181 7E00

m	108,0	108,0	108,0											
16,0	173,0	173,0	172,0											
18,0	147,0	149,0	151,0											
20,0	129,0	131,0	134,0											
22,0	113,0	115,0	118,0											
24,0	97,0	99,0	101,0											
26,0	87,0	89,0	91,0											
28,0	78,0	80,0	82,0											
30,0	69,0	70,0	72,0											
32,0	60,0	61,0	63,0											
34,0	55,0	56,0	58,0											
36,0	49,5	51,0	52,0											
38,0	44,5	45,5	47,0											
40,0	39,5	40,5	42,0											
44,0	29,6	30,5	32,0											
48,0	24,2	25,0	26,1											
52,0	18,8	19,6	20,4											
56,0	13,5	14,1	14,7											
60,0	10,6	11,2	11,8											
64,0	7,7	8,2	8,8											
68,0		5,3	5,9											
*** n ***	11	11	11											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	170 t	14.0 x 14.0 m	zz t yy m		
	108m						

ISO DIN

SD	--
108m	

074607 *** 253 22.50

m > < t

CODE >8510< V181 7E00

m	108,0	108,0	108,0											
16,0	176,0	175,0	175,0											
18,0	153,0	154,0	157,0											
20,0	135,0	136,0	140,0											
22,0	119,0	120,0	123,0											
24,0	103,0	104,0	107,0											
26,0	92,0	93,0	96,0											
28,0	82,0	84,0	86,0											
30,0	73,0	74,0	76,0											
32,0	63,0	65,0	67,0											
34,0	58,0	59,0	61,0											
36,0	53,0	54,0	55,0											
38,0	47,5	48,5	50,0											
40,0	42,0	43,0	44,5											
44,0	32,0	33,0	34,0											
48,0	26,4	27,2	28,4											
52,0	20,9	21,6	22,7											
56,0	15,5	16,0	17,0											
60,0	12,4	12,8	13,8											
64,0	9,4	9,9	10,7											
68,0	6,5	6,9	7,6											
72,0			5,1											
*** n ***	11	11	11											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	190 t	14.0 x 14.0 m	zz t yy m		
	108m						

ISO DIN

SD	--
114m	

074607 *** 251 22.50

m > < t

CODE >8515<

V181 7F00

m	114,0	114,0	114,0											
16,0	159,0	158,0	157,0											
18,0	138,0	139,0	141,0											
20,0	120,0	122,0	125,0											
22,0	106,0	108,0	111,0											
24,0	92,0	94,0	96,0											
26,0	80,0	82,0	84,0											
28,0	72,0	74,0	76,0											
30,0	64,0	66,0	68,0											
32,0	56,0	58,0	59,0											
34,0	49,0	50,0	52,0											
36,0	44,5	45,5	47,5											
38,0	40,0	41,0	42,5											
40,0	35,0	36,5	38,0											
44,0	25,8	26,8	28,3											
48,0	19,4	20,3	21,6											
52,0	15,1	15,9	17,1											
56,0	10,8	11,5	12,5											
60,0	7,1	7,7	8,5											
64,0	5,1	5,5	6,1											
*** n ***	10	10	10											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	150 t	14.0 x 14.0 m	yy m zz t		
	114m						

ISO DIN

SD	--
114m	

074607 *** 252 22.50

m > < t

CODE >8514<

V181 7F00

m	114,0	114,0	114,0											
16,0	160,0	159,0	158,0											
18,0	142,0	143,0	145,0											
20,0	126,0	127,0	131,0											
22,0	111,0	113,0	116,0											
24,0	97,0	98,0	101,0											
26,0	84,0	86,0	88,0											
28,0	76,0	78,0	80,0											
30,0	68,0	69,0	71,0											
32,0	60,0	61,0	63,0											
34,0	52,0	53,0	55,0											
36,0	47,5	48,5	50,0											
38,0	42,5	43,5	45,0											
40,0	37,5	38,5	40,5											
44,0	28,0	29,0	30,5											
48,0	21,4	22,3	23,6											
52,0	17,1	17,8	18,9											
56,0	12,7	13,3	14,2											
60,0	8,9	9,3	10,0											
64,0	6,4	6,7	7,4											
*** n ***	10	10	10											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	170 t	14.0 x 14.0 m	zz t yy m		
	114m						

ISO DIN

SD	--
114m	

074607 *** 253 22.50

m > < t

CODE >8513<

V181 7F00

m	114,0	114,0	114,0											
16,0	162,0	160,0	159,0											
18,0	147,0	147,0	148,0											
20,0	131,0	133,0	136,0											
22,0	117,0	118,0	121,0											
24,0	102,0	103,0	106,0											
26,0	89,0	90,0	92,0											
28,0	80,0	81,0	84,0											
30,0	72,0	73,0	75,0											
32,0	63,0	64,0	66,0											
34,0	55,0	56,0	58,0											
36,0	50,0	51,0	53,0											
38,0	45,5	46,5	48,0											
40,0	40,5	41,5	43,0											
44,0	30,5	31,5	33,0											
48,0	23,5	24,4	25,7											
52,0	19,1	19,8	21,0											
56,0	14,6	15,3	16,3											
60,0	10,6	11,1	12,0											
64,0	7,9	8,4	9,2											
68,0	5,3	5,7	6,5											
*** n ***	10	10	10											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	190 t	14.0 x 14.0 m	yy m zz t		
	114m						

ISO DIN

SD	--
120m	

074607 *** 251 22.50

m > < t

CODE >8518<

V181 8000

m	120,0	120,0	120,0											
16,0	146,0	145,0	144,0											
18,0	132,0	132,0	133,0											
20,0	117,0	119,0	121,0											
22,0	104,0	106,0	108,0											
24,0	91,0	93,0	96,0											
26,0	79,0	80,0	83,0											
28,0	70,0	72,0	74,0											
30,0	63,0	64,0	66,0											
32,0	56,0	57,0	59,0											
34,0	48,5	49,5	51,0											
36,0	42,5	43,5	45,5											
38,0	38,5	39,5	41,0											
40,0	34,0	35,0	36,5											
44,0	25,6	26,3	27,7											
48,0	17,2	17,8	18,9											
52,0	13,5	14,1	15,1											
56,0	9,8	10,4	11,3											
60,0	6,1	6,7	7,4											
*** n ***	9	9	9											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	150 t	14.0 x 14.0 m	yy m zz t		
	120m						

ISO DIN

SD	--
120m	

074607 *** 252 22.50

m > < t

CODE >8517<

V181 8000

m	120,0	120,0	120,0											
16,0	146,0	145,0	144,0											
18,0	134,0	135,0	135,0											
20,0	122,0	124,0	127,0											
22,0	109,0	111,0	114,0											
24,0	96,0	98,0	100,0											
26,0	83,0	84,0	87,0											
28,0	74,0	75,0	78,0											
30,0	66,0	68,0	70,0											
32,0	59,0	60,0	62,0											
34,0	51,0	53,0	54,0											
36,0	45,5	46,5	48,0											
38,0	41,0	42,0	43,5											
40,0	36,5	37,5	39,0											
44,0	28,0	28,9	29,9											
48,0	19,4	20,3	21,0											
52,0	15,6	16,3	17,0											
56,0	11,8	12,4	13,1											
60,0	8,1	8,5	9,2											
64,0	5,5	5,8	6,3											
*** n ***	9	9	9											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	170 t	14.0 x 14.0 m	zz t yy m		
	120m						

ISO DIN

SD	--
120m	

074607 *** 253 22.50

m > < t

CODE >8516<

V181 8000

m	120,0	120,0	120,0											
16,0	147,0	145,0	144,0											
18,0	137,0	137,0	137,0											
20,0	127,0	129,0	131,0											
22,0	114,0	116,0	118,0											
24,0	101,0	102,0	105,0											
26,0	87,0	89,0	91,0											
28,0	78,0	79,0	81,0											
30,0	70,0	71,0	73,0											
32,0	62,0	64,0	65,0											
34,0	55,0	56,0	58,0											
36,0	48,0	49,5	51,0											
38,0	44,0	45,0	46,5											
40,0	39,5	40,5	42,0											
44,0	30,5	31,5	32,5											
48,0	21,8	22,6	23,6											
52,0	17,7	18,4	19,3											
56,0	13,7	14,4	15,2											
60,0	9,8	10,3	11,2											
64,0	6,8	7,2	7,9											
68,0		5,2	5,7											
*** n ***	9	9	9											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	190 t	14.0 x 14.0 m	zz t yy m		
	120m						

ISO DIN

SD	--
126m	

074607 *** 251 22.50

m > < t

CODE >8521<

V181 8100

m	126,0	126,0	126,0											
18,0	122,0	122,0	122,0											
20,0	112,0	113,0	116,0											
22,0	101,0	103,0	106,0											
24,0	89,0	91,0	94,0											
26,0	78,0	80,0	82,0											
28,0	68,0	69,0	71,0											
30,0	61,0	62,0	64,0											
32,0	54,0	55,0	57,0											
34,0	47,5	48,5	51,0											
36,0	40,5	42,0	43,5											
38,0	36,0	37,0	39,0											
40,0	32,5	33,5	35,0											
44,0	24,8	25,8	27,0											
48,0	17,4	18,3	19,2											
52,0	11,9	12,7	13,4											
56,0	8,5	9,3	10,0											
60,0	5,2	5,8	6,6											
*** n ***	8	8	8											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	150 t	14.0 x 14.0 m	zz t yy m		
	126m						

ISO DIN

SD	--
126m	

074607 *** 252 22.50

m > < t

CODE >8520<

V181 8100

m	126,0	126,0	126,0											
18,0	123,0	123,0	124,0											
20,0	116,0	117,0	120,0											
22,0	106,0	108,0	111,0											
24,0	94,0	96,0	98,0											
26,0	82,0	84,0	86,0											
28,0	71,0	73,0	75,0											
30,0	64,0	66,0	68,0											
32,0	57,0	59,0	61,0											
34,0	50,0	52,0	54,0											
36,0	43,5	44,5	46,5											
38,0	38,5	40,0	41,5											
40,0	35,0	36,0	37,5											
44,0	27,4	28,1	29,7											
48,0	19,8	20,3	21,7											
52,0	14,1	14,5	15,7											
56,0	10,6	11,0	12,1											
60,0	7,0	7,5	8,4											
*** n ***	8	8	8											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	170 t	14.0 x 14.0 m	yy m zz t		
	126m						

ISO DIN

SD	--
126m	

074607 *** 253 22.50

m > < t

CODE >8519<

V181 8100

m	126,0	126,0	126,0											
18,0	125,0	125,0	125,0											
20,0	119,0	121,0	122,0											
22,0	110,0	113,0	115,0											
24,0	98,0	100,0	103,0											
26,0	86,0	88,0	91,0											
28,0	75,0	76,0	79,0											
30,0	68,0	69,0	71,0											
32,0	61,0	62,0	64,0											
34,0	54,0	55,0	57,0											
36,0	47,0	48,0	49,5											
38,0	41,5	42,5	44,5											
40,0	37,5	39,0	40,0											
44,0	29,9	31,0	32,0											
48,0	22,1	23,0	24,0											
52,0	16,1	16,9	17,7											
56,0	12,5	13,2	14,0											
60,0	8,9	9,5	10,3											
64,0	5,3	5,9	6,6											
*** n ***	8	8	8											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	190 t	14.0 x 14.0 m	yy m zz t		
	126m						

ISO DIN

SD	--
132m	

074607 *** 251 22.50

m > < t

CODE >8524<

V181 8200

m	132,0	132,0	132,0											
18,0	110,0	110,0	110,0											
20,0	104,0	105,0	106,0											
22,0	97,0	99,0	101,0											
24,0	86,0	88,0	91,0											
26,0	76,0	78,0	80,0											
28,0	65,0	67,0	69,0											
30,0	58,0	59,0	61,0											
32,0	51,0	53,0	55,0											
34,0	45,0	46,0	48,0											
36,0	38,5	40,0	41,5											
38,0	32,5	33,5	35,0											
40,0	28,8	29,9	31,5											
44,0	22,4	23,4	24,8											
48,0	16,1	16,9	18,1											
52,0	9,8	10,4	11,3											
56,0	7,0	7,5	8,2											
60,0			5,4											
*** n ***	7	7	7											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	150 t	14.0 x 14.0 m	zz t yy m		
	132m						

ISO DIN

SD	--
132m	

074607 *** 252 22.50

m > < t

CODE >8523<

V181 8200

m	132,0	132,0	132,0											
18,0	110,0	110,0	110,0											
20,0	106,0	107,0	109,0											
22,0	101,0	103,0	106,0											
24,0	90,0	92,0	95,0											
26,0	80,0	81,0	84,0											
28,0	69,0	70,0	73,0											
30,0	61,0	62,0	64,0											
32,0	54,0	56,0	58,0											
34,0	48,0	49,0	51,0											
36,0	41,5	42,5	44,5											
38,0	35,0	36,0	38,0											
40,0	31,0	32,5	34,0											
44,0	24,7	25,7	27,2											
48,0	18,3	19,0	20,3											
52,0	11,8	12,4	13,4											
56,0	8,5	9,0	9,8											
60,0	5,6	5,9	6,5											
*** n ***	7	7	7											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	170 t	14.0 x 14.0 m	zz t yy m		
	132m						

ISO DIN

SD	--
132m	

074607 *** 253 22.50

m > < t

CODE >8522<

V181 8200

m	132,0	132,0	132,0											
18,0	111,0	111,0	110,0											
20,0	108,0	109,0	110,0											
22,0	105,0	107,0	110,0											
24,0	94,0	97,0	99,0											
26,0	84,0	86,0	88,0											
28,0	73,0	75,0	77,0											
30,0	64,0	66,0	68,0											
32,0	58,0	59,0	61,0											
34,0	51,0	52,0	54,0											
36,0	44,5	46,0	47,5											
38,0	38,0	39,0	41,0											
40,0	34,0	35,0	36,5											
44,0	27,4	28,2	29,6											
48,0	20,7	21,4	22,6											
52,0	14,1	14,6	15,5											
56,0	10,3	10,8	11,7											
60,0	7,1	7,6	8,3											
64,0			5,0											
*** n ***	7	7	7											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	190 t	14.0 x 14.0 m	zz t yy m		
	132m						

ISO DIN

SD	--
138m	

074607 *** 251 22.50

m > < t

CODE >8527<

V181 8300

m	138,0	138,0	138,0											
18,0	99,0	99,0	98,0											
20,0	96,0	97,0	98,0											
22,0	93,0	95,0	97,0											
24,0	85,0	87,0	89,0											
26,0	75,0	77,0	79,0											
28,0	66,0	67,0	69,0											
30,0	56,0	58,0	60,0											
32,0	50,0	52,0	54,0											
34,0	44,0	45,5	47,5											
36,0	38,0	39,5	41,5											
38,0	32,5	33,5	35,5											
40,0	26,7	28,0	29,7											
44,0	21,2	22,2	23,8											
48,0	15,7	16,5	17,8											
52,0	10,1	10,8	11,8											
56,0	6,1	6,5	7,3											
60,0			5,3											
*** n ***	6	6	6											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	150 t	14.0 x 14.0 m	yy m zz t		
	138m						

ISO DIN

SD	--
138m	

074607 *** 252 22.50

m > < t

CODE >8526<

V181 8300

m	138,0	138,0	138,0											
18,0	99,0	99,0	98,0											
20,0	97,0	99,0	98,0											
22,0	96,0	99,0	98,0											
24,0	89,0	91,0	91,0											
26,0	79,0	81,0	81,0											
28,0	69,0	71,0	72,0											
30,0	59,0	61,0	63,0											
32,0	53,0	55,0	57,0											
34,0	47,0	48,5	50,0											
36,0	41,0	42,5	44,0											
38,0	35,0	36,0	38,0											
40,0	29,1	30,5	32,0											
44,0	23,5	24,5	26,0											
48,0	17,8	18,6	20,0											
52,0	12,1	12,7	13,9											
56,0	7,7	8,2	9,1											
60,0	5,6	5,9	6,6											
*** n ***	6	6	6											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	170 t	14.0 x 14.0 m	zz t yy m		
	138m						

ISO DIN

SD	--
138m	

074607 *** 253 22.50

m > < t

CODE >8525<

V181 8300

m	138,0	138,0	138,0											
18,0	98,0	98,0	97,0											
20,0	98,0	98,0	97,0											
22,0	98,0	98,0	97,0											
24,0	92,0	92,0	92,0											
26,0	82,0	83,0	83,0											
28,0	73,0	74,0	75,0											
30,0	63,0	64,0	66,0											
32,0	56,0	58,0	60,0											
34,0	50,0	52,0	54,0											
36,0	44,0	45,5	47,5											
38,0	38,0	39,0	41,0											
40,0	31,5	33,0	34,5											
44,0	25,9	26,9	28,5											
48,0	20,1	21,0	22,3											
52,0	14,4	15,1	16,2											
56,0	9,6	10,1	11,0											
60,0	7,0	7,4	8,0											
64,0			5,1											
*** n ***	6	6	6											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	190 t	14.0 x 14.0 m	zz t yy m		
	138m						

ISO DIN

SD	--
144m	

074607 *** 251 22.50

m > < t

CODE >8530<

V181 8400

m	144,0	144,0	144,0											
18,0		86,0	86,0											
20,0	85,0	86,0	86,0											
22,0	83,0	85,0	85,0											
24,0	80,0	82,0	82,0											
26,0	72,0	73,0	74,0											
28,0	63,0	65,0	66,0											
30,0	54,0	56,0	58,0											
32,0	47,0	48,5	51,0											
34,0	41,0	42,5	44,5											
36,0	35,5	36,5	39,0											
38,0	29,4	31,0	33,0											
40,0	23,6	25,0	27,0											
44,0	16,8	18,2	19,9											
48,0	12,4	13,5	14,9											
52,0	7,9	8,8	10,0											
56,0			5,0											
*** n ***	5	5	5											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	150 t	14.0 x 14.0 m	yy m zz t		
	144m						

ISO DIN

SD	--
144m	

074607 *** 252 22.50

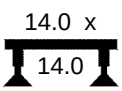
m > < t

CODE >8529<

V181 8400

m	144,0	144,0	144,0											
18,0		86,0	85,0											
20,0	84,0	85,0	85,0											
22,0	84,0	85,0	85,0											
24,0	81,0	82,0	82,0											
26,0	73,0	74,0	75,0											
28,0	65,0	66,0	67,0											
30,0	57,0	58,0	60,0											
32,0	50,0	51,0	53,0											
34,0	44,0	45,5	47,5											
36,0	38,0	39,5	41,5											
38,0	32,0	33,5	35,5											
40,0	26,0	27,5	29,4											
44,0	19,1	20,4	22,1											
48,0	14,5	15,5	17,0											
52,0	9,9	10,7	11,9											
56,0	5,3	5,9	6,8											
*** n ***	5	5	5											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

SD	--
144m	



ISO DIN

SD	--
144m	

074607 *** 253 22.50

m > < t

CODE >8528<

V181 8400

m	144,0	144,0	144,0											
20,0	84,0	85,0	84,0											
22,0	83,0	84,0	84,0											
24,0	82,0	82,0	82,0											
26,0	74,0	75,0	76,0											
28,0	67,0	68,0	69,0											
30,0	60,0	61,0	63,0											
32,0	53,0	55,0	57,0											
34,0	47,0	48,5	51,0											
36,0	41,0	42,5	44,5											
38,0	35,0	36,5	38,5											
40,0	29,3	30,5	32,0											
44,0	21,8	22,7	24,5											
48,0	17,0	17,8	19,3											
52,0	12,2	12,9	14,2											
56,0	7,4	8,0	9,1											
60,0	5,1	5,6	6,4											
*** n ***	5	5	5											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SD	--	190 t	14.0 x 14.0 m	yy m zz t		
	144m						

ISO DIN

SLD	--
54m	

074607 *** 254 22.50

m > < t

CODE >8533<

V181 8500

m	54,0	54,0	54,0											
9,0	307,0	307,0	307,0											
10,0	303,0	305,0	307,0											
11,0	295,0	298,0	303,0											
12,0	270,0	273,0	277,0											
14,0	223,0	225,0	229,0											
16,0	193,0	194,0	198,0											
18,0	165,0	166,0	170,0											
20,0	147,0	149,0	152,0											
22,0	130,0	132,0	134,0											
24,0	114,0	116,0	118,0											
26,0	104,0	106,0	108,0											
28,0	94,0	95,0	97,0											
30,0	85,0	86,0	88,0											
32,0	78,0	79,0	81,0											
34,0	72,0	73,0	74,0											
36,0	65,0	66,0	68,0											
38,0	60,0	61,0	63,0											
40,0	56,0	57,0	58,0											
44,0	47,5	48,5	49,5											
48,0	41,5	42,0	43,0											
52,0	35,5	36,5	37,5											
*** n ***	20	20	20											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SLD	--	150 t	14.0 x 14.0 m	yy m zz t		
	54m						

ISO DIN

SLD	--
54m	

074607 *** 255 22.50

m > < t

CODE >8532<

V181 8500

m	54,0	54,0	54,0											
9,0	308,0	308,0	308,0											
10,0	309,0	309,0	309,0											
11,0	306,0	306,0	307,0											
12,0	280,0	282,0	283,0											
14,0	231,0	235,0	239,0											
16,0	200,0	203,0	207,0											
18,0	171,0	174,0	177,0											
20,0	153,0	156,0	158,0											
22,0	135,0	138,0	140,0											
24,0	120,0	122,0	123,0											
26,0	109,0	111,0	113,0											
28,0	99,0	100,0	102,0											
30,0	89,0	90,0	92,0											
32,0	82,0	83,0	85,0											
34,0	76,0	77,0	78,0											
36,0	69,0	70,0	71,0											
38,0	63,0	65,0	66,0											
40,0	59,0	60,0	61,0											
44,0	50,0	51,0	52,0											
48,0	44,0	44,5	46,0											
52,0	38,0	39,0	40,0											
*** n ***	20	20	20											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SLD	--	170 t	14.0 x 14.0 m	zz t yy m		
	54m						

ISO DIN

SLD	--
54m	

074607 *** 256 22.50

m > < t

CODE >8531<

V181 8500

m	54,0	54,0	54,0											
9,0	308,0	308,0	308,0											
10,0	309,0	309,0	309,0											
11,0	307,0	307,0	307,0											
12,0	284,0	285,0	287,0											
14,0	241,0	244,0	247,0											
16,0	208,0	211,0	214,0											
18,0	179,0	181,0	183,0											
20,0	160,0	162,0	164,0											
22,0	142,0	143,0	146,0											
24,0	125,0	126,0	129,0											
26,0	114,0	115,0	118,0											
28,0	103,0	105,0	107,0											
30,0	93,0	94,0	96,0											
32,0	86,0	87,0	89,0											
34,0	79,0	80,0	82,0											
36,0	72,0	73,0	75,0											
38,0	67,0	68,0	69,0											
40,0	62,0	63,0	64,0											
44,0	53,0	54,0	55,0											
48,0	46,5	47,5	48,5											
52,0	40,5	41,5	42,5											
*** n ***	20	20	20											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SLD	--	190 t	14.0 x 14.0 m	zz t yy m		
	54m						

ISO DIN

SLD	--
60m	

074607 *** 254 22.50

m > < t

CODE >8536<

V181 8600

m	60,0	60,0	60,0											
10,0	297,0	297,0	299,0											
11,0	282,0	284,0	289,0											
12,0	265,0	268,0	275,0											
14,0	223,0	226,0	231,0											
16,0	190,0	193,0	197,0											
18,0	165,0	168,0	170,0											
20,0	144,0	146,0	148,0											
22,0	129,0	132,0	133,0											
24,0	115,0	117,0	118,0											
26,0	101,0	103,0	105,0											
28,0	93,0	95,0	96,0											
30,0	85,0	86,0	87,0											
32,0	76,0	77,0	79,0											
34,0	70,0	71,0	72,0											
36,0	65,0	65,0	67,0											
38,0	59,0	60,0	62,0											
40,0	54,0	55,0	56,0											
44,0	46,5	47,5	48,5											
48,0	39,5	40,5	41,5											
52,0	34,5	35,0	36,0											
56,0	29,5	30,0	31,0											
60,0	26,0	26,6	27,6											
*** n ***	19	19	19											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SLD	--	150 t	14.0 x 14.0 m	zz t yy m		
	60m						

ISO DIN

SLD	--
60m	

074607 *** 255 22.50

m > < t

CODE >8535<

V181 8600

m	60,0	60,0	60,0											
10,0	300,0	300,0	301,0											
11,0	291,0	293,0	296,0											
12,0	277,0	280,0	284,0											
14,0	233,0	236,0	239,0											
16,0	198,0	201,0	204,0											
18,0	172,0	174,0	177,0											
20,0	151,0	152,0	155,0											
22,0	136,0	137,0	139,0											
24,0	120,0	121,0	124,0											
26,0	107,0	107,0	110,0											
28,0	98,0	99,0	101,0											
30,0	89,0	90,0	92,0											
32,0	80,0	81,0	83,0											
34,0	74,0	75,0	76,0											
36,0	68,0	69,0	71,0											
38,0	63,0	64,0	65,0											
40,0	57,0	58,0	59,0											
44,0	49,5	50,0	52,0											
48,0	42,5	43,0	44,0											
52,0	37,0	37,5	38,5											
56,0	32,0	32,5	33,5											
60,0	28,1	28,7	29,7											
*** n ***	19	19	20											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SLD	--	170 t	14.0 x 14.0 m	zz t yy m		
	60m						

ISO DIN

SLD	--
60m	

074607 *** 256 22.50

m > < t

CODE >8534<

V181 8600

m	60,0	60,0	60,0											
10,0	302,0	303,0	304,0											
11,0	298,0	300,0	303,0											
12,0	287,0	290,0	295,0											
14,0	242,0	244,0	249,0											
16,0	206,0	208,0	212,0											
18,0	179,0	181,0	185,0											
20,0	156,0	159,0	162,0											
22,0	141,0	143,0	146,0											
24,0	126,0	127,0	130,0											
26,0	112,0	113,0	115,0											
28,0	102,0	103,0	106,0											
30,0	93,0	94,0	96,0											
32,0	84,0	85,0	87,0											
34,0	77,0	78,0	80,0											
36,0	71,0	73,0	74,0											
38,0	66,0	67,0	68,0											
40,0	60,0	61,0	63,0											
44,0	52,0	53,0	54,0											
48,0	45,0	45,5	47,0											
52,0	39,0	40,0	41,0											
56,0	34,0	34,5	35,5											
60,0	30,0	31,0	32,0											
*** n ***	20	20	20											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SLD	--	190 t	14.0 x 14.0 m	zz t yy m		
	60m						

ISO DIN

SLD	--
66m	

074607 *** 254 22.50

m > < t

CODE >8539<

V181 8700

m	66,0	66,0	66,0											
11,0	282,0	283,0	284,0											
12,0	261,0	263,0	266,0											
14,0	223,0	225,0	228,0											
16,0	186,0	187,0	191,0											
18,0	164,0	165,0	169,0											
20,0	142,0	143,0	146,0											
22,0	126,0	127,0	130,0											
24,0	114,0	115,0	118,0											
26,0	101,0	103,0	105,0											
28,0	89,0	91,0	93,0											
30,0	82,0	84,0	86,0											
32,0	75,0	77,0	78,0											
34,0	68,0	69,0	71,0											
36,0	62,0	63,0	65,0											
38,0	57,0	58,0	60,0											
40,0	53,0	54,0	55,0											
44,0	44,0	45,0	46,0											
48,0	38,0	39,0	40,0											
52,0	32,5	33,0	34,0											
56,0	27,6	28,3	29,2											
60,0	23,7	24,3	25,2											
64,0	20,3	20,9	21,7											
*** n ***	18	18	18											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SLD	--	150 t	14.0 x 14.0 m	yy m zz t		
	66m						

ISO DIN

SLD	--
66m	

074607 *** 255 22.50

m > < t

CODE >8538<

V181 8700

m	66,0	66,0	66,0											
11,0	286,0	287,0	289,0											
12,0	269,0	271,0	275,0											
14,0	231,0	234,0	239,0											
16,0	193,0	196,0	200,0											
18,0	170,0	173,0	176,0											
20,0	149,0	150,0	153,0											
22,0	132,0	133,0	136,0											
24,0	119,0	121,0	123,0											
26,0	106,0	108,0	110,0											
28,0	94,0	96,0	97,0											
30,0	87,0	88,0	89,0											
32,0	79,0	81,0	82,0											
34,0	72,0	73,0	74,0											
36,0	65,0	66,0	67,0											
38,0	61,0	62,0	63,0											
40,0	56,0	57,0	58,0											
44,0	47,0	47,5	49,0											
48,0	40,5	41,5	42,5											
52,0	34,5	35,5	36,5											
56,0	29,9	30,5	31,5											
60,0	25,8	26,4	27,3											
64,0	22,3	22,8	23,7											
*** n ***	18	18	19											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SLD	--	170 t	14.0 x 14.0 m	zz t yy m		
	66m						

ISO DIN

SLD	--
66m	

074607 *** 256 22.50

m > < t

CODE >8537<

V181 8700

m	66,0	66,0	66,0											
11,0	290,0	291,0	292,0											
12,0	277,0	279,0	282,0											
14,0	241,0	244,0	247,0											
16,0	201,0	204,0	207,0											
18,0	178,0	180,0	183,0											
20,0	155,0	157,0	160,0											
22,0	138,0	139,0	142,0											
24,0	125,0	126,0	128,0											
26,0	112,0	113,0	115,0											
28,0	99,0	99,0	102,0											
30,0	91,0	92,0	94,0											
32,0	83,0	84,0	86,0											
34,0	76,0	76,0	78,0											
36,0	69,0	69,0	71,0											
38,0	64,0	65,0	66,0											
40,0	59,0	60,0	61,0											
44,0	50,0	51,0	52,0											
48,0	43,5	44,0	45,0											
52,0	37,0	38,0	39,0											
56,0	32,0	33,0	34,0											
60,0	27,9	28,5	29,4											
64,0	24,2	24,8	25,6											
*** n ***	19	19	19											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SLD 66m	--	190 t	14.0 x 14.0 m	yy m zz t		

ISO DIN

SLD	--
72m	

074607 *** 254 22.50

m > < t

CODE >8542<

V181 8800

m	72,0	72,0	72,0											
11,0	288,0	291,0	290,0											
12,0	263,0	265,0	267,0											
14,0	218,0	221,0	226,0											
16,0	187,0	189,0	193,0											
18,0	160,0	163,0	165,0											
20,0	142,0	144,0	146,0											
22,0	123,0	124,0	127,0											
24,0	111,0	112,0	115,0											
26,0	100,0	102,0	104,0											
28,0	90,0	91,0	93,0											
30,0	79,0	81,0	83,0											
32,0	73,0	74,0	76,0											
34,0	67,0	68,0	70,0											
36,0	61,0	62,0	64,0											
38,0	55,0	56,0	57,0											
40,0	51,0	52,0	53,0											
44,0	43,0	44,0	45,5											
48,0	35,5	36,5	37,5											
52,0	31,0	31,5	32,5											
56,0	26,0	26,7	27,6											
60,0	22,0	22,6	23,4											
64,0	18,9	19,4	20,1											
68,0	16,1	16,6	17,2											
72,0	14,4	14,9	15,4											
*** n ***	19	19	19											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SLD	--	150 t	14.0 x 14.0 m	zz t yy m		
	72m						

ISO DIN

SLD	--
72m	

074607 *** 255 22.50

m > < t

CODE >8541<

V181 8800

m	72,0	72,0	72,0											
11,0	291,0	292,0	291,0											
12,0	269,0	270,0	272,0											
14,0	228,0	230,0	235,0											
16,0	195,0	197,0	201,0											
18,0	167,0	169,0	172,0											
20,0	148,0	150,0	153,0											
22,0	128,0	130,0	133,0											
24,0	116,0	118,0	120,0											
26,0	105,0	107,0	109,0											
28,0	94,0	96,0	98,0											
30,0	83,0	85,0	87,0											
32,0	77,0	78,0	80,0											
34,0	71,0	72,0	74,0											
36,0	65,0	66,0	67,0											
38,0	58,0	59,0	61,0											
40,0	54,0	55,0	56,0											
44,0	46,0	47,0	48,0											
48,0	38,5	39,0	40,0											
52,0	33,5	34,0	35,0											
56,0	28,3	28,9	29,9											
60,0	24,0	24,6	25,5											
64,0	20,7	21,1	22,0											
68,0	17,7	18,1	18,8											
72,0	15,8	16,4	17,0											
*** n ***	19	19	19											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

SLD	--
72m	

170 t

14.0 x 14.0 m

zz t

yy m

ISO DIN

SLD	--
72m	

074607 *** 256 22.50

m > < t

CODE >8540<

V181 8800

m	72,0	72,0	72,0											
11,0	292,0	293,0	292,0											
12,0	273,0	275,0	276,0											
14,0	237,0	239,0	244,0											
16,0	202,0	205,0	209,0											
18,0	174,0	176,0	180,0											
20,0	154,0	156,0	160,0											
22,0	134,0	136,0	139,0											
24,0	121,0	123,0	126,0											
26,0	110,0	112,0	114,0											
28,0	99,0	101,0	103,0											
30,0	88,0	89,0	91,0											
32,0	81,0	82,0	84,0											
34,0	75,0	76,0	78,0											
36,0	68,0	69,0	71,0											
38,0	62,0	63,0	64,0											
40,0	57,0	58,0	59,0											
44,0	49,0	50,0	51,0											
48,0	41,0	41,5	43,0											
52,0	36,0	36,5	37,5											
56,0	30,5	31,0	32,0											
60,0	26,1	26,7	27,6											
64,0	22,5	23,1	23,9											
68,0	19,3	19,9	20,5											
72,0	17,5	17,9	18,4											
*** n ***	19	19	19											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SLD 72m	--	190 t	14.0 x 14.0 m	yy m zz t		

ISO DIN

SLD	--
78m	

074607 *** 254 22.50

m > < t

CODE >8545<

V181 8900

m	78,0	78,0	78,0											
12,0	260,0	259,0	259,0											
14,0	216,0	218,0	223,0											
16,0	187,0	189,0	193,0											
18,0	160,0	161,0	165,0											
20,0	141,0	143,0	146,0											
22,0	125,0	127,0	129,0											
24,0	109,0	111,0	112,0											
26,0	100,0	101,0	103,0											
28,0	90,0	92,0	94,0											
30,0	81,0	83,0	85,0											
32,0	72,0	74,0	75,0											
34,0	66,0	68,0	69,0											
36,0	61,0	62,0	64,0											
38,0	56,0	57,0	59,0											
40,0	51,0	52,0	53,0											
44,0	43,0	44,0	45,0											
48,0	36,5	37,5	38,5											
52,0	30,0	31,0	32,0											
56,0	26,0	26,7	27,6											
60,0	21,9	22,5	23,2											
64,0	18,3	18,8	19,5											
68,0	15,9	16,4	17,1											
72,0	13,5	14,0	14,7											
76,0	11,8	12,2	12,8											
*** n ***	17	17	17											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SLD	--	150 t	14.0 x 14.0 m	zz t yy m		
	78m						

ISO DIN

SLD	--
78m	

074607 *** 255 22.50

m > < t

CODE >8544<

V181 8900

m	78,0	78,0	78,0											
12,0	262,0	262,0	262,0											
14,0	225,0	226,0	231,0											
16,0	195,0	197,0	201,0											
18,0	166,0	168,0	172,0											
20,0	147,0	149,0	152,0											
22,0	130,0	132,0	135,0											
24,0	114,0	115,0	118,0											
26,0	105,0	106,0	108,0											
28,0	95,0	96,0	99,0											
30,0	86,0	87,0	89,0											
32,0	76,0	78,0	80,0											
34,0	70,0	72,0	73,0											
36,0	65,0	66,0	68,0											
38,0	59,0	60,0	62,0											
40,0	54,0	55,0	56,0											
44,0	46,0	46,5	48,0											
48,0	39,0	40,0	41,0											
52,0	32,5	33,5	34,5											
56,0	28,3	28,9	29,9											
60,0	24,0	24,6	25,5											
64,0	20,2	20,8	21,6											
68,0	17,7	18,1	18,9											
72,0	15,1	15,4	16,1											
76,0	13,2	13,5	14,3											
*** n ***	17	17	17											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SLD 78m	--	170 t	14.0 x 14.0 m	yy m zz t		

ISO DIN

SLD	--
78m	

074607 *** 256 22.50

m > < t

CODE >8543<

V181 8900

m	78,0	78,0	78,0											
12,0	264,0	264,0	264,0											
14,0	233,0	235,0	239,0											
16,0	203,0	205,0	210,0											
18,0	173,0	176,0	179,0											
20,0	154,0	156,0	159,0											
22,0	136,0	138,0	141,0											
24,0	119,0	121,0	123,0											
26,0	110,0	111,0	113,0											
28,0	100,0	101,0	103,0											
30,0	90,0	91,0	93,0											
32,0	80,0	82,0	83,0											
34,0	74,0	75,0	76,0											
36,0	68,0	70,0	71,0											
38,0	63,0	64,0	65,0											
40,0	57,0	58,0	59,0											
44,0	48,5	49,5	51,0											
48,0	42,0	42,5	43,5											
52,0	35,0	35,5	36,5											
56,0	30,5	31,0	32,0											
60,0	26,1	26,7	27,6											
64,0	22,2	22,7	23,5											
68,0	19,4	19,8	20,5											
72,0	16,6	16,9	17,5											
76,0	14,7	15,1	15,5											
*** n ***	17	17	17											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SLD	--	190 t	14.0 x 14.0 m	zz t yy m		
	78m						

ISO DIN

SLD	--
84m	

074607 *** 254 22.50

m > < t

CODE >8548<

V181 8A00

m	84,0	84,0	84,0											
12,0	255,0	257,0	255,0											
14,0	215,0	218,0	220,0											
16,0	183,0	186,0	190,0											
18,0	159,0	161,0	164,0											
20,0	137,0	139,0	142,0											
22,0	123,0	124,0	127,0											
24,0	109,0	110,0	113,0											
26,0	96,0	97,0	100,0											
28,0	88,0	89,0	91,0											
30,0	80,0	81,0	83,0											
32,0	72,0	73,0	75,0											
34,0	64,0	65,0	67,0											
36,0	59,0	60,0	61,0											
38,0	54,0	55,0	57,0											
40,0	49,5	51,0	52,0											
44,0	40,5	41,5	42,5											
48,0	34,5	35,5	36,5											
52,0	29,2	29,9	31,0											
56,0	23,8	24,5	25,4											
60,0	20,5	21,1	21,9											
64,0	17,3	17,8	18,5											
68,0	14,2	14,7	15,2											
72,0	12,1	12,6	13,1											
76,0	10,1	10,5	11,0											
80,0	8,5	8,8	9,5											
84,0	7,5	7,9	8,5											
*** n ***	16	16	16											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SLD	--	150 t	14.0 x 14.0 m	zz t yy m		
	84m						

ISO DIN

SLD	--
84m	

074607 *** 255 22.50

m > < t

CODE >8547<

V181 8A00

m	84,0	84,0	84,0											
12,0	258,0	257,0	255,0											
14,0	222,0	224,0	225,0											
16,0	192,0	194,0	198,0											
18,0	167,0	168,0	172,0											
20,0	144,0	145,0	148,0											
22,0	129,0	130,0	133,0											
24,0	114,0	116,0	118,0											
26,0	100,0	102,0	105,0											
28,0	92,0	94,0	96,0											
30,0	84,0	86,0	88,0											
32,0	76,0	77,0	79,0											
34,0	68,0	69,0	71,0											
36,0	62,0	63,0	65,0											
38,0	58,0	59,0	60,0											
40,0	53,0	54,0	55,0											
44,0	43,5	44,5	45,5											
48,0	37,5	38,0	39,5											
52,0	31,5	32,5	33,5											
56,0	26,1	26,7	27,7											
60,0	22,5	23,1	24,0											
64,0	19,0	19,6	20,3											
68,0	15,7	16,2	16,8											
72,0	13,6	14,0	14,7											
76,0	11,5	11,9	12,6											
80,0	9,7	10,1	10,8											
84,0	8,7	9,2	9,7											
*** n ***	16	16	16											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SLD	--	170 t	14.0 x 14.0 m	yy m zz t		
	84m						

ISO DIN

SLD	--
84m	

074607 *** 256 22.50

m > < t

CODE >8546<

V181 8A00

m	84,0	84,0	84,0											
12,0	258,0	257,0	255,0											
14,0	228,0	229,0	230,0											
16,0	199,0	202,0	205,0											
18,0	173,0	176,0	179,0											
20,0	149,0	152,0	155,0											
22,0	134,0	136,0	139,0											
24,0	119,0	121,0	124,0											
26,0	105,0	107,0	109,0											
28,0	97,0	99,0	101,0											
30,0	89,0	90,0	92,0											
32,0	80,0	81,0	83,0											
34,0	72,0	73,0	74,0											
36,0	66,0	67,0	68,0											
38,0	61,0	62,0	63,0											
40,0	56,0	57,0	58,0											
44,0	46,5	47,0	48,5											
48,0	40,0	41,0	42,0											
52,0	34,0	35,0	36,0											
56,0	28,3	29,0	29,9											
60,0	24,6	25,2	25,9											
64,0	20,8	21,4	22,0											
68,0	17,3	17,8	18,3											
72,0	15,2	15,6	16,1											
76,0	13,0	13,4	13,9											
80,0	11,2	11,6	12,1											
84,0	10,1	10,5	11,0											
*** n ***	16	16	16											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SLD	--	190 t	14.0 x 14.0 m	yy m zz t		
	84m						

ISO DIN

SLD	--
90m	

074607 *** 254 22.50

m > < t

CODE >8551<

V181 8B00

m	90,0	90,0	90,0											
14,0	212,0	214,0	214,0											
16,0	178,0	182,0	185,0											
18,0	157,0	160,0	162,0											
20,0	136,0	137,0	140,0											
22,0	120,0	121,0	124,0											
24,0	108,0	109,0	111,0											
26,0	95,0	96,0	99,0											
28,0	85,0	86,0	88,0											
30,0	78,0	79,0	81,0											
32,0	71,0	72,0	74,0											
34,0	64,0	65,0	67,0											
36,0	57,0	58,0	60,0											
38,0	52,0	53,0	54,0											
40,0	48,0	49,0	50,0											
44,0	40,0	41,0	42,0											
48,0	32,5	33,0	34,5											
52,0	27,6	28,2	29,2											
56,0	22,7	23,2	24,0											
60,0	18,2	18,6	19,3											
64,0	15,6	16,0	16,6											
68,0	13,0	13,3	13,9											
72,0	10,3	10,7	11,3											
76,0	8,6	9,0	9,5											
80,0	6,8	7,3	7,8											
84,0	5,2	5,6	6,1											
*** n ***	13	13	13											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SLD	--	150 t	14.0 x 14.0 m	yy m zz t		
	90m						

ISO DIN

SLD	--
90m	

074607 *** 255 22.50

m > < t

CODE >8550<

V181 8B00

m	90,0	90,0	90,0											
14,0	217,0	218,0	218,0											
16,0	186,0	190,0	192,0											
18,0	164,0	167,0	170,0											
20,0	142,0	144,0	147,0											
22,0	126,0	127,0	130,0											
24,0	113,0	115,0	117,0											
26,0	100,0	102,0	104,0											
28,0	89,0	91,0	93,0											
30,0	82,0	84,0	85,0											
32,0	75,0	76,0	78,0											
34,0	68,0	69,0	71,0											
36,0	61,0	62,0	63,0											
38,0	55,0	56,0	58,0											
40,0	51,0	52,0	53,0											
44,0	43,0	43,5	45,0											
48,0	35,0	36,0	37,0											
52,0	29,9	30,5	31,5											
56,0	24,7	25,4	26,4											
60,0	19,9	20,6	21,5											
64,0	17,2	17,9	18,7											
68,0	14,5	15,1	15,8											
72,0	11,7	12,4	12,9											
76,0	10,0	10,5	11,0											
80,0	8,2	8,7	9,1											
84,0	6,6	6,9	7,3											
88,0	5,3	5,6	6,1											
*** n ***	14	14	14											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SLD	--	170 t	14.0 x 14.0 m	yy m zz t		
	90m						

ISO DIN

SLD	--
90m	

074607 *** 256 22.50

m > < t

CODE >8549<

V181 8B00

m	90,0	90,0	90,0											
14,0	221,0	221,0	221,0											
16,0	194,0	197,0	200,0											
18,0	171,0	174,0	177,0											
20,0	148,0	151,0	153,0											
22,0	131,0	133,0	136,0											
24,0	118,0	120,0	122,0											
26,0	105,0	106,0	109,0											
28,0	94,0	95,0	97,0											
30,0	87,0	88,0	90,0											
32,0	79,0	80,0	82,0											
34,0	72,0	73,0	74,0											
36,0	64,0	65,0	67,0											
38,0	58,0	59,0	61,0											
40,0	54,0	55,0	57,0											
44,0	45,5	46,5	48,0											
48,0	37,5	38,5	39,5											
52,0	32,5	33,0	34,5											
56,0	27,1	27,9	28,9											
60,0	22,2	23,0	23,9											
64,0	19,2	19,9	20,7											
68,0	16,3	16,8	17,5											
72,0	13,4	13,7	14,4											
76,0	11,5	11,8	12,4											
80,0	9,6	9,9	10,5											
84,0	7,8	8,1	8,7											
88,0	6,5	6,8	7,3											
*** n ***	14	14	14											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SLD	--	190 t	14.0 x 14.0 m	zz t yy m		
	90m						

ISO DIN

SLD	--
96m	

074607 *** 254 22.50

m > < t

CODE >8554<

V181 8C00

m	96,0	96,0	96,0											
14,0	208,0	208,0	207,0											
16,0	177,0	179,0	182,0											
18,0	154,0	156,0	160,0											
20,0	135,0	137,0	140,0											
22,0	117,0	118,0	120,0											
24,0	105,0	107,0	109,0											
26,0	94,0	96,0	98,0											
28,0	83,0	85,0	87,0											
30,0	75,0	76,0	78,0											
32,0	69,0	70,0	72,0											
34,0	63,0	64,0	66,0											
36,0	56,0	58,0	59,0											
38,0	50,0	51,0	53,0											
40,0	45,5	46,5	47,5											
44,0	38,5	39,0	40,5											
48,0	31,5	32,0	33,5											
52,0	25,6	26,2	27,3											
56,0	21,5	22,0	23,0											
60,0	17,4	17,8	18,7											
64,0	13,8	14,1	14,9											
68,0	11,4	11,8	12,6											
72,0	9,1	9,5	10,2											
76,0	6,8	7,2	7,9											
80,0	5,1	5,6	6,2											
*** n ***	13	13	13											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SLD	--	150 t	14.0 x 14.0 m	yy m zz t		
	96m						

ISO DIN

SLD	--
96m	

074607 *** 255 22.50

m > < t

CODE >8553<

V181 8C00

m	96,0	96,0	96,0											
14,0	211,0	210,0	209,0											
16,0	184,0	185,0	187,0											
18,0	161,0	163,0	167,0											
20,0	142,0	143,0	146,0											
22,0	122,0	124,0	126,0											
24,0	111,0	112,0	114,0											
26,0	99,0	101,0	103,0											
28,0	88,0	89,0	91,0											
30,0	79,0	81,0	82,0											
32,0	73,0	74,0	76,0											
34,0	66,0	68,0	69,0											
36,0	60,0	61,0	63,0											
38,0	54,0	55,0	56,0											
40,0	48,5	49,5	51,0											
44,0	41,0	42,0	43,5											
48,0	34,0	34,5	36,0											
52,0	27,9	28,6	29,7											
56,0	23,5	24,2	25,2											
60,0	19,1	19,7	20,7											
64,0	15,2	15,8	16,6											
68,0	12,8	13,4	14,1											
72,0	10,5	11,0	11,7											
76,0	8,1	8,7	9,2											
80,0	6,4	6,9	7,4											
84,0		5,3	5,8											
*** n ***	13	13	13											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SLD	--	170 t	14.0 x 14.0 m	zz t yy m		
	96m						

ISO DIN

SLD	--
96m	

074607 *** 256 22.50

m > < t

CODE >8552<

V181 8C00

m	96,0	96,0	96,0											
14,0	213,0	212,0	211,0											
16,0	190,0	191,0	193,0											
18,0	168,0	170,0	174,0											
20,0	148,0	150,0	153,0											
22,0	128,0	129,0	132,0											
24,0	116,0	117,0	120,0											
26,0	104,0	106,0	108,0											
28,0	92,0	94,0	95,0											
30,0	83,0	85,0	86,0											
32,0	77,0	78,0	80,0											
34,0	70,0	71,0	73,0											
36,0	64,0	65,0	66,0											
38,0	57,0	58,0	59,0											
40,0	52,0	53,0	54,0											
44,0	44,0	45,0	46,5											
48,0	36,5	37,5	38,5											
52,0	30,5	31,0	32,0											
56,0	25,7	26,4	27,3											
60,0	21,1	21,7	22,5											
64,0	16,9	17,5	18,2											
68,0	14,5	15,0	15,6											
72,0	12,1	12,5	13,1											
76,0	9,7	10,1	10,5											
80,0	7,9	8,2	8,7											
84,0	6,2	6,5	7,0											
88,0			5,4											
*** n ***	13	13	13											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SLD	--	190 t	14.0 x 14.0 m	zz t yy m		
	96m						

ISO DIN

SLD	--
102m	

074607 *** 254 22.50

m > < t

CODE >8557<

V181 8D00

m	102,0	102,0	102,0											
14,0	194,0	192,0	190,0											
16,0	172,0	173,0	174,0											
18,0	151,0	154,0	158,0											
20,0	134,0	137,0	140,0											
22,0	117,0	119,0	122,0											
24,0	103,0	105,0	108,0											
26,0	93,0	95,0	98,0											
28,0	84,0	85,0	87,0											
30,0	74,0	75,0	77,0											
32,0	67,0	69,0	70,0											
34,0	62,0	63,0	65,0											
36,0	56,0	57,0	59,0											
38,0	51,0	52,0	53,0											
40,0	45,5	46,5	48,0											
44,0	37,5	38,5	39,5											
48,0	31,0	32,0	33,0											
52,0	24,6	25,4	26,6											
56,0	20,4	21,1	22,1											
60,0	17,0	17,6	18,6											
64,0	13,6	14,2	15,0											
68,0	10,7	11,2	11,9											
72,0	8,7	9,1	9,8											
76,0	6,7	7,1	7,7											
80,0		5,1	5,6											
*** n ***	12	12	12											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SLD	--	150 t	14.0 x 14.0 m	yy m zz t		
	102m						

ISO DIN

SLD	--
102m	

074607 *** 255 22.50

m > < t

CODE >8556<

V181 8D00

m	102,0	102,0	102,0											
14,0	194,0	192,0	190,0											
16,0	176,0	177,0	178,0											
18,0	159,0	161,0	164,0											
20,0	141,0	143,0	146,0											
22,0	123,0	125,0	128,0											
24,0	109,0	111,0	113,0											
26,0	98,0	100,0	103,0											
28,0	88,0	90,0	92,0											
30,0	78,0	79,0	82,0											
32,0	71,0	72,0	75,0											
34,0	66,0	67,0	69,0											
36,0	60,0	61,0	63,0											
38,0	54,0	55,0	57,0											
40,0	48,5	49,5	51,0											
44,0	40,5	41,5	42,5											
48,0	34,0	35,0	36,0											
52,0	27,2	28,2	29,3											
56,0	22,7	23,5	24,5											
60,0	19,1	19,7	20,7											
64,0	15,5	15,9	16,8											
68,0	12,4	12,6	13,4											
72,0	10,3	10,5	11,3											
76,0	8,1	8,4	9,1											
80,0	6,0	6,3	7,0											
84,0			5,3											
*** n ***	12	12	12											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SLD	--	170 t	14.0 x 14.0 m	zz t yy m		
	102m						

ISO DIN

SLD	--
102m	

074607 *** 256 22.50

m > < t

CODE >8555<

V181 8D00

m	102,0	102,0	102,0											
14,0	194,0	193,0	191,0											
16,0	180,0	181,0	182,0											
18,0	165,0	167,0	171,0											
20,0	147,0	149,0	152,0											
22,0	129,0	131,0	133,0											
24,0	114,0	116,0	118,0											
26,0	103,0	105,0	107,0											
28,0	93,0	94,0	96,0											
30,0	82,0	83,0	86,0											
32,0	75,0	76,0	79,0											
34,0	69,0	70,0	72,0											
36,0	63,0	64,0	66,0											
38,0	58,0	59,0	60,0											
40,0	52,0	53,0	54,0											
44,0	43,5	44,0	45,5											
48,0	36,5	37,5	38,5											
52,0	29,9	30,5	31,5											
56,0	25,1	25,7	26,7											
60,0	21,2	21,7	22,6											
64,0	17,3	17,6	18,5											
68,0	13,8	14,1	14,9											
72,0	11,7	12,0	12,7											
76,0	9,5	9,8	10,5											
80,0	7,3	7,6	8,4											
84,0	5,7	6,0	6,6											
88,0			5,1											
*** n ***	12	12	12											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SLD	--	190 t	14.0 x 14.0 m	yy m zz t		
	102m						

ISO DIN

SLD	--
108m	

074607 *** 254 22.50

m > < t

CODE >8560<

V181 8E00

m	108,0	108,0	108,0											
16,0	155,0	156,0	157,0											
18,0	146,0	148,0	151,0											
20,0	132,0	134,0	138,0											
22,0	116,0	118,0	122,0											
24,0	101,0	103,0	106,0											
26,0	91,0	93,0	96,0											
28,0	83,0	84,0	86,0											
30,0	74,0	75,0	77,0											
32,0	65,0	66,0	68,0											
34,0	60,0	61,0	63,0											
36,0	55,0	56,0	58,0											
38,0	50,0	51,0	53,0											
40,0	45,5	46,5	48,0											
44,0	36,0	37,0	38,0											
48,0	30,0	31,0	32,0											
52,0	24,5	25,1	26,1											
56,0	18,7	19,2	20,1											
60,0	15,8	16,2	17,1											
64,0	12,9	13,4	14,2											
68,0	10,1	10,5	11,3											
72,0	7,7	8,0	8,7											
76,0	5,9	6,2	6,9											
80,0			5,0											
*** n ***	10	10	10											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

SLD	--
108m	

150 t

14.0 x 14.0 m

zz t

yy m

ISO DIN

SLD	--
108m	

074607 *** 255 22.50

m > < t

CODE >8559<

V181 8E00

m	108,0	108,0	108,0											
16,0	157,0	158,0	159,0											
18,0	151,0	153,0	156,0											
20,0	138,0	140,0	143,0											
22,0	122,0	124,0	127,0											
24,0	106,0	109,0	111,0											
26,0	96,0	98,0	100,0											
28,0	87,0	89,0	91,0											
30,0	78,0	80,0	82,0											
32,0	69,0	70,0	72,0											
34,0	64,0	65,0	67,0											
36,0	59,0	60,0	62,0											
38,0	54,0	55,0	56,0											
40,0	48,5	49,5	51,0											
44,0	39,0	39,5	41,0											
48,0	33,0	33,5	35,0											
52,0	26,8	27,6	28,8											
56,0	20,8	21,5	22,6											
60,0	17,6	18,3	19,3											
64,0	14,6	15,3	16,2											
68,0	11,6	12,3	13,0											
72,0	9,0	9,7	10,3											
76,0	7,2	7,8	8,3											
80,0	5,4	5,9	6,4											
*** n ***	10	10	10											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SLD	--	170 t	14.0 x 14.0 m	zz t yy m		
	108m						

ISO DIN

SLD	--
108m	

074607 *** 256 22.50

m > < t

CODE >8558<

V181 8E00

m	108,0	108,0	108,0											
16,0	158,0	159,0	159,0											
18,0	153,0	155,0	156,0											
20,0	141,0	142,0	144,0											
22,0	126,0	128,0	130,0											
24,0	112,0	113,0	115,0											
26,0	102,0	103,0	105,0											
28,0	92,0	93,0	95,0											
30,0	82,0	84,0	86,0											
32,0	73,0	74,0	76,0											
34,0	67,0	69,0	70,0											
36,0	62,0	63,0	65,0											
38,0	57,0	58,0	60,0											
40,0	52,0	53,0	54,0											
44,0	41,5	42,5	44,0											
48,0	35,5	36,5	37,5											
52,0	29,4	30,0	31,5											
56,0	23,2	24,0	25,1											
60,0	19,9	20,5	21,5											
64,0	16,7	17,2	18,0											
68,0	13,5	13,9	14,6											
72,0	10,7	11,1	11,6											
76,0	8,7	9,1	9,7											
80,0	6,8	7,1	7,7											
84,0		5,2	5,7											
*** n ***	10	10	10											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SLD	--	190 t	14.0 x 14.0 m	zz t yy m		
	108m						

ISO DIN

SLD	--
114m	

074607 *** 254 22.50

m > < t

CODE >8563<

V181 8F00

m	114,0	114,0	114,0											
16,0	152,0	153,0	153,0											
18,0	139,0	141,0	142,0											
20,0	125,0	127,0	131,0											
22,0	111,0	113,0	116,0											
24,0	98,0	100,0	102,0											
26,0	86,0	88,0	90,0											
28,0	78,0	79,0	82,0											
30,0	70,0	71,0	73,0											
32,0	62,0	63,0	65,0											
34,0	55,0	56,0	58,0											
36,0	50,0	52,0	53,0											
38,0	46,0	47,0	48,5											
40,0	41,5	42,5	44,0											
44,0	32,5	33,5	35,0											
48,0	25,9	26,8	28,0											
52,0	21,1	21,9	22,9											
56,0	16,3	17,0	17,8											
60,0	12,2	12,8	13,4											
64,0	9,7	10,2	10,8											
68,0	7,2	7,6	8,3											
72,0		5,1	5,8											
*** n ***	9	9	9											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SLD	--	150 t	14.0 x 14.0 m	zz t yy m		
	114m						

ISO DIN

SLD	--
114m	

074607 *** 255 22.50

m > < t

CODE >8562<

V181 8F00

m	114,0	114,0	114,0											
16,0	153,0	155,0	154,0											
18,0	143,0	145,0	147,0											
20,0	131,0	133,0	137,0											
22,0	117,0	119,0	122,0											
24,0	103,0	105,0	107,0											
26,0	90,0	92,0	95,0											
28,0	82,0	84,0	86,0											
30,0	74,0	76,0	78,0											
32,0	66,0	67,0	69,0											
34,0	59,0	60,0	61,0											
36,0	54,0	55,0	57,0											
38,0	49,5	50,0	52,0											
40,0	44,5	46,0	47,5											
44,0	35,5	36,5	38,0											
48,0	28,6	29,5	31,0											
52,0	23,5	24,3	25,4											
56,0	18,3	19,0	19,9											
60,0	13,9	14,5	15,2											
64,0	11,3	11,8	12,5											
68,0	8,7	9,2	9,9											
72,0	6,1	6,5	7,3											
76,0			5,2											
*** n ***	9	10	10											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SLD	--	170 t	14.0 x 14.0 m	yy m zz t		
	114m						

ISO DIN

SLD	--
114m	

074607 *** 256 22.50

m > < t

CODE >8561<

V181 8F00

m	114,0	114,0	114,0											
16,0	154,0	156,0	156,0											
18,0	147,0	149,0	152,0											
20,0	137,0	140,0	143,0											
22,0	123,0	125,0	128,0											
24,0	108,0	110,0	113,0											
26,0	95,0	97,0	99,0											
28,0	87,0	88,0	91,0											
30,0	78,0	80,0	82,0											
32,0	70,0	71,0	73,0											
34,0	62,0	63,0	65,0											
36,0	57,0	59,0	60,0											
38,0	53,0	54,0	55,0											
40,0	48,0	49,0	51,0											
44,0	39,0	39,5	41,0											
48,0	31,5	32,5	33,5											
52,0	26,0	26,8	27,8											
56,0	20,5	21,2	22,0											
60,0	15,7	16,3	17,1											
64,0	13,0	13,5	14,3											
68,0	10,2	10,8	11,5											
72,0	7,5	8,0	8,7											
76,0	5,4	5,7	6,3											
*** n ***	10	10	10											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

SLD	--
114m	

190 t

14.0 x 14.0 m

zz t

yy m

ISO DIN

SLD	--
120m	

074607 *** 254 22.50

m > < t

CODE >8566<

V181 9000

m	120,0	120,0	120,0											
16,0	135,0	138,0	136,0											
18,0	129,0	131,0	132,0											
20,0	122,0	125,0	128,0											
22,0	109,0	112,0	115,0											
24,0	97,0	99,0	102,0											
26,0	85,0	86,0	89,0											
28,0	76,0	78,0	80,0											
30,0	69,0	70,0	72,0											
32,0	62,0	63,0	65,0											
34,0	54,0	56,0	58,0											
36,0	48,5	50,0	52,0											
38,0	44,5	45,5	47,5											
40,0	40,5	41,5	43,0											
44,0	32,0	33,0	34,5											
48,0	24,0	24,9	26,2											
52,0	20,0	20,7	21,9											
56,0	15,9	16,6	17,6											
60,0	11,9	12,4	13,3											
64,0	8,8	9,2	10,1											
68,0	6,6	7,0	7,7											
72,0			5,4											
*** n ***	8	9	8											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SLD	--	150 t	14.0 x 14.0 m	yy m zz t		
	120m						

ISO DIN

SLD	--
120m	

074607 *** 255 22.50

m > < t

CODE >8565<

V181 9000

m	120,0	120,0	120,0											
16,0	136,0	138,0	136,0											
18,0	132,0	134,0	135,0											
20,0	128,0	130,0	133,0											
22,0	115,0	117,0	120,0											
24,0	102,0	104,0	107,0											
26,0	90,0	91,0	93,0											
28,0	81,0	82,0	84,0											
30,0	73,0	75,0	77,0											
32,0	66,0	67,0	69,0											
34,0	58,0	59,0	61,0											
36,0	52,0	53,0	55,0											
38,0	48,0	49,0	51,0											
40,0	43,5	45,0	46,5											
44,0	35,5	36,5	37,5											
48,0	26,9	27,8	29,1											
52,0	22,5	23,3	24,4											
56,0	18,2	18,9	19,8											
60,0	13,8	14,4	15,1											
64,0	10,5	11,1	11,7											
68,0	8,1	8,7	9,3											
72,0	5,8	6,3	6,8											
*** n ***	8	9	8											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

SLD	--
120m	

170 t

14.0 x 14.0 m

zz t

yy m

ISO DIN

SLD	--
120m	

074607 *** 256 22.50

m > < t

CODE >8564<

V181 9000

m	120,0	120,0	120,0											
16,0	136,0	139,0	137,0											
18,0	135,0	137,0	136,0											
20,0	133,0	135,0	135,0											
22,0	120,0	123,0	123,0											
24,0	107,0	109,0	110,0											
26,0	94,0	96,0	98,0											
28,0	85,0	87,0	89,0											
30,0	77,0	79,0	81,0											
32,0	70,0	71,0	73,0											
34,0	62,0	63,0	65,0											
36,0	56,0	57,0	59,0											
38,0	51,0	52,0	54,0											
40,0	47,0	48,0	49,5											
44,0	38,5	39,5	40,5											
48,0	29,7	30,5	32,0											
52,0	25,0	25,8	26,9											
56,0	20,3	21,0	21,9											
60,0	15,6	16,3	17,0											
64,0	12,1	12,7	13,3											
68,0	9,7	10,2	10,8											
72,0	7,3	7,7	8,3											
76,0		5,3	5,8											
*** n ***	8	9	8											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SLD	--	190 t	14.0 x 14.0 m	zz t yy m		
	120m						

ISO DIN

SLD	--
126m	

074607 *** 254 22.50

m > < t

CODE >8569<

V181 9100

m	126,0	126,0	126,0											
18,0	116,0	118,0	116,0											
20,0	114,0	117,0	115,0											
22,0	107,0	110,0	109,0											
24,0	96,0	98,0	98,0											
26,0	85,0	87,0	88,0											
28,0	74,0	76,0	78,0											
30,0	68,0	69,0	71,0											
32,0	61,0	63,0	65,0											
34,0	55,0	56,0	58,0											
36,0	48,0	49,0	51,0											
38,0	43,5	44,5	46,0											
40,0	39,5	40,5	42,0											
44,0	31,5	32,5	34,0											
48,0	23,9	24,9	26,2											
52,0	18,2	19,1	20,3											
56,0	14,8	15,5	16,7											
60,0	11,4	12,0	13,0											
64,0	8,0	8,5	9,4											
68,0	6,0	6,3	7,0											
*** n ***	7	7	7											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SLD	--	150 t	14.0 x 14.0 m	zz t yy m		
	126m						

ISO DIN

SLD	--
126m	

074607 *** 255 22.50

m > < t

CODE >8568<

V181 9100

m	126,0	126,0	126,0											
18,0	117,0	119,0	116,0											
20,0	116,0	118,0	115,0											
22,0	110,0	111,0	109,0											
24,0	99,0	101,0	100,0											
26,0	89,0	90,0	92,0											
28,0	79,0	80,0	83,0											
30,0	72,0	74,0	76,0											
32,0	65,0	67,0	69,0											
34,0	58,0	60,0	62,0											
36,0	52,0	53,0	54,0											
38,0	46,5	48,0	49,5											
40,0	42,5	44,0	45,5											
44,0	35,0	36,0	37,5											
48,0	26,9	27,8	29,2											
52,0	21,0	21,8	23,0											
56,0	17,2	18,0	19,0											
60,0	13,5	14,2	15,1											
64,0	9,8	10,4	11,1											
68,0	7,4	7,9	8,6											
72,0	5,2	5,7	6,3											
*** n ***	7	7	7											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SLD	--	170 t	14.0 x 14.0 m	zz t yy m		
	126m						

ISO DIN

SLD	--
126m	

074607 *** 256 22.50

m > < t

CODE >8567<

V181 9100

m	126,0	126,0	126,0											
18,0	117,0	119,0	116,0											
20,0	116,0	118,0	115,0											
22,0	111,0	112,0	110,0											
24,0	101,0	103,0	102,0											
26,0	92,0	94,0	95,0											
28,0	84,0	85,0	87,0											
30,0	76,0	78,0	80,0											
32,0	69,0	70,0	73,0											
34,0	62,0	63,0	65,0											
36,0	55,0	56,0	58,0											
38,0	50,0	51,0	53,0											
40,0	46,0	47,0	48,5											
44,0	38,0	39,0	40,5											
48,0	29,8	31,0	32,0											
52,0	23,6	24,4	25,6											
56,0	19,6	20,3	21,3											
60,0	15,6	16,1	17,1											
64,0	11,6	12,0	12,8											
68,0	9,0	9,4	10,1											
72,0	6,8	7,1	7,8											
76,0			5,5											
*** n ***	7	7	7											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SLD	--	190 t	14.0 x 14.0 m	zz t yy m		
	126m						

ISO DIN

SLD	--
132m	

074607 *** 254 22.50

m > < t

CODE >8572<

V181 9200

m	132,0	132,0	132,0											
18,0	99,0	101,0	99,0											
20,0	99,0	100,0	98,0											
22,0	97,0	97,0	96,0											
24,0	89,0	89,0	89,0											
26,0	80,0	81,0	82,0											
28,0	72,0	73,0	75,0											
30,0	65,0	67,0	69,0											
32,0	59,0	60,0	62,0											
34,0	53,0	54,0	56,0											
36,0	47,0	48,0	50,0											
38,0	41,0	42,0	43,5											
40,0	37,0	38,5	40,0											
44,0	30,5	31,0	32,5											
48,0	23,5	24,1	25,3											
52,0	16,6	17,0	18,0											
56,0	13,1	13,5	14,5											
60,0	10,0	10,4	11,3											
64,0	6,8	7,2	8,2											
68,0			5,2											
*** n ***	6	6	6											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SLD	--	150 t	14.0 x 14.0 m	zz t yy m		
	132m						

ISO DIN

SLD	--
132m	

074607 *** 255 22.50

m > < t

CODE >8571<

V181 9200

m	132,0	132,0	132,0											
18,0	99,0	101,0	99,0											
20,0	99,0	100,0	98,0											
22,0	97,0	98,0	96,0											
24,0	90,0	91,0	90,0											
26,0	83,0	84,0	85,0											
28,0	76,0	77,0	79,0											
30,0	69,0	71,0	73,0											
32,0	63,0	64,0	66,0											
34,0	57,0	58,0	60,0											
36,0	50,0	52,0	54,0											
38,0	44,0	45,5	47,0											
40,0	40,5	41,5	43,0											
44,0	33,0	34,0	35,5											
48,0	25,7	26,5	27,7											
52,0	18,4	19,0	20,1											
56,0	14,9	15,5	16,4											
60,0	11,6	12,3	13,1											
64,0	8,4	9,1	9,8											
68,0	5,4	6,1	6,7											
72,0			5,1											
*** n ***	6	6	6											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SLD	--	170 t	14.0 x 14.0 m	zz t yy m		
	132m						

ISO DIN

SLD	--
132m	

074607 *** 256 22.50

m > < t

CODE >8570<

V181 9200

m	132,0	132,0	132,0											
18,0	99,0	101,0	99,0											
20,0	99,0	100,0	98,0											
22,0	97,0	98,0	96,0											
24,0	91,0	92,0	92,0											
26,0	86,0	87,0	87,0											
28,0	80,0	81,0	83,0											
30,0	74,0	75,0	77,0											
32,0	67,0	68,0	70,0											
34,0	61,0	62,0	64,0											
36,0	54,0	55,0	57,0											
38,0	47,5	48,5	50,0											
40,0	43,5	44,5	46,0											
44,0	36,0	37,0	38,5											
48,0	28,1	29,1	30,5											
52,0	20,5	21,4	22,8											
56,0	16,8	17,6	18,7											
60,0	13,5	14,2	15,1											
64,0	10,3	10,8	11,5											
68,0	7,1	7,5	8,1											
72,0	5,5	5,8	6,2											
*** n ***	6	6	6											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SLD	--	190 t	14.0 x 14.0 m	zz t yy m		
	132m						

ISO DIN

SLD	--
138m	

074607 *** 254 22.50

m > < t

CODE >8575<

V181 9300

m	138,0	138,0	138,0											
18,0	86,0	87,0	85,0											
20,0	85,0	86,0	84,0											
22,0	85,0	84,0	82,0											
24,0	80,0	80,0	79,0											
26,0	75,0	75,0	75,0											
28,0	69,0	70,0	71,0											
30,0	64,0	65,0	67,0											
32,0	58,0	59,0	61,0											
34,0	52,0	54,0	56,0											
36,0	46,5	48,0	50,0											
38,0	41,0	42,0	44,5											
40,0	35,5	37,0	38,5											
44,0	29,5	30,5	32,0											
48,0	23,4	24,2	25,6											
52,0	17,2	17,9	19,1											
56,0	12,3	12,9	13,8											
60,0	9,5	10,0	10,8											
64,0	6,6	7,1	7,9											
68,0			5,0											
*** n ***	5	5	5											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SLD	--	150 t	14.0 x 14.0 m	yy m zz t		
	138m						

ISO DIN

SLD	--
138m	

074607 *** 255 22.50

m > < t

CODE >8574<

V181 9300

m	138,0	138,0	138,0											
18,0	86,0	87,0	85,0											
20,0	85,0	86,0	84,0											
22,0	85,0	84,0	82,0											
24,0	81,0	81,0	80,0											
26,0	77,0	77,0	77,0											
28,0	72,0	73,0	74,0											
30,0	68,0	69,0	71,0											
32,0	62,0	63,0	65,0											
34,0	56,0	57,0	59,0											
36,0	50,0	52,0	54,0											
38,0	44,5	46,0	47,5											
40,0	39,0	40,0	41,5											
44,0	32,5	33,5	35,0											
48,0	26,1	26,8	28,2											
52,0	19,5	20,1	21,4											
56,0	14,2	14,6	15,8											
60,0	11,3	11,7	12,7											
64,0	8,3	8,7	9,7											
68,0	5,4	5,7	6,6											
*** n ***	5	5	5											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SLD	--	170 t	14.0 x 14.0 m	zz t yy m		
	138m						

ISO DIN

SLD	--
138m	

074607 *** 256 22.50

m > < t

CODE >8573<

V181 9300

m	138,0	138,0	138,0											
18,0	86,0	87,0	85,0											
20,0	85,0	86,0	84,0											
22,0	85,0	84,0	82,0											
24,0	82,0	82,0	80,0											
26,0	79,0	79,0	78,0											
28,0	75,0	76,0	77,0											
30,0	72,0	73,0	75,0											
32,0	66,0	67,0	69,0											
34,0	60,0	61,0	63,0											
36,0	54,0	55,0	57,0											
38,0	48,0	49,0	51,0											
40,0	42,5	43,5	45,0											
44,0	35,5	36,5	37,5											
48,0	28,4	29,4	30,5											
52,0	21,5	22,4	23,3											
56,0	15,9	16,7	17,5											
60,0	12,9	13,6	14,4											
64,0	9,9	10,5	11,3											
68,0	6,8	7,4	8,2											
72,0		5,0	5,7											
*** n ***	5	5	5											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SLD	--	190 t	14.0 x 14.0 m	zz t yy m		
	138m						

ISO DIN

SL2D	--
72m	

074607 *** 257 22.50

m > < t

CODE >8578<

V181 9400

m	72,0	72,0	72,0											
11,0	288,0	291,0	292,0											
12,0	262,0	265,0	267,0											
14,0	218,0	220,0	224,0											
16,0	186,0	187,0	191,0											
18,0	159,0	161,0	164,0											
20,0	140,0	142,0	145,0											
22,0	121,0	123,0	126,0											
24,0	109,0	111,0	114,0											
26,0	99,0	101,0	103,0											
28,0	89,0	90,0	92,0											
30,0	78,0	79,0	81,0											
32,0	72,0	73,0	75,0											
34,0	66,0	67,0	68,0											
36,0	60,0	61,0	62,0											
38,0	54,0	55,0	56,0											
40,0	49,5	50,0	52,0											
44,0	42,0	43,0	44,0											
48,0	34,5	35,0	36,5											
52,0	29,6	30,5	31,5											
56,0	24,8	25,4	26,4											
60,0	20,8	21,4	22,2											
64,0	17,7	18,3	19,0											
68,0	15,0	15,5	16,1											
72,0	13,4	13,9	14,3											
*** n ***	19	19	19											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SL2D 72m	--	150 t	14.0 x 14.0 m	zz t yy m		

ISO DIN

SL2D	--
72m	

074607 *** 258 22.50

m > < t

CODE >8577<

V181 9400

m	72,0	72,0	72,0											
11,0	294,0	293,0	293,0											
12,0	270,0	270,0	272,0											
14,0	227,0	229,0	233,0											
16,0	194,0	196,0	200,0											
18,0	166,0	168,0	172,0											
20,0	147,0	149,0	152,0											
22,0	127,0	129,0	132,0											
24,0	115,0	117,0	119,0											
26,0	104,0	106,0	108,0											
28,0	93,0	95,0	97,0											
30,0	83,0	83,0	85,0											
32,0	76,0	77,0	79,0											
34,0	70,0	71,0	72,0											
36,0	63,0	64,0	66,0											
38,0	57,0	58,0	59,0											
40,0	53,0	54,0	55,0											
44,0	45,0	45,5	47,0											
48,0	37,0	38,0	39,0											
52,0	32,0	32,5	34,0											
56,0	27,0	27,7	28,6											
60,0	22,8	23,4	24,2											
64,0	19,5	20,1	20,8											
68,0	16,5	17,1	17,7											
72,0	14,8	15,2	15,9											
*** n ***	19	19	19											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SL2D	--	170 t	14.0 x 14.0 m	zz t yy m		
	72m						

ISO DIN

SL2D	--
72m	

074607 *** 259 22.50

m > < t

CODE >8576<

V181 9400

m	72,0	72,0	72,0											
11,0	295,0	294,0	294,0											
12,0	274,0	275,0	276,0											
14,0	235,0	238,0	242,0											
16,0	201,0	204,0	208,0											
18,0	173,0	175,0	179,0											
20,0	153,0	155,0	158,0											
22,0	133,0	135,0	137,0											
24,0	120,0	121,0	124,0											
26,0	109,0	110,0	113,0											
28,0	98,0	99,0	101,0											
30,0	87,0	88,0	90,0											
32,0	80,0	81,0	83,0											
34,0	74,0	74,0	76,0											
36,0	67,0	68,0	69,0											
38,0	60,0	61,0	63,0											
40,0	56,0	57,0	58,0											
44,0	47,5	48,5	50,0											
48,0	39,5	40,5	41,5											
52,0	34,5	35,0	36,0											
56,0	29,3	29,9	31,0											
60,0	24,8	25,4	26,3											
64,0	21,2	21,8	22,5											
68,0	18,1	18,6	19,2											
72,0	16,3	16,7	17,4											
*** n ***	19	19	19											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SL2D	--	190 t	14.0 x 14.0 m	zz t yy m		
	72m						

ISO DIN

SL2D	--
78m	

074607 *** 257 22.50

m > < t

CODE >8581<

V181 9500

m	78,0	78,0	78,0											
12,0	259,0	262,0	266,0											
14,0	213,0	215,0	219,0											
16,0	184,0	186,0	190,0											
18,0	156,0	159,0	161,0											
20,0	138,0	140,0	142,0											
22,0	122,0	123,0	126,0											
24,0	106,0	107,0	109,0											
26,0	97,0	98,0	100,0											
28,0	88,0	89,0	91,0											
30,0	79,0	80,0	82,0											
32,0	69,0	71,0	72,0											
34,0	64,0	65,0	66,0											
36,0	58,0	59,0	61,0											
38,0	53,0	54,0	56,0											
40,0	48,0	49,0	50,0											
44,0	40,0	41,0	42,0											
48,0	33,5	34,5	35,5											
52,0	27,3	28,0	29,0											
56,0	23,3	24,0	24,8											
60,0	19,3	19,9	20,6											
64,0	15,8	16,3	17,0											
68,0	13,4	13,9	14,6											
72,0	11,0	11,4	12,2											
76,0	9,2	9,8	10,4											
*** n ***	17	17	17											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SL2D 78m	--	150 t	14.0 x 14.0 m	yy m zz t		

ISO DIN

SL2D	--
78m	

074607 *** 258 22.50

m > < t

CODE >8580<

V181 9500

m	78,0	78,0	78,0											
12,0	269,0	271,0	271,0											
14,0	221,0	225,0	228,0											
16,0	192,0	194,0	198,0											
18,0	164,0	165,0	169,0											
20,0	145,0	146,0	149,0											
22,0	128,0	129,0	132,0											
24,0	111,0	112,0	115,0											
26,0	102,0	103,0	105,0											
28,0	92,0	93,0	95,0											
30,0	83,0	84,0	86,0											
32,0	73,0	75,0	76,0											
34,0	67,0	68,0	70,0											
36,0	62,0	63,0	64,0											
38,0	56,0	57,0	59,0											
40,0	51,0	52,0	53,0											
44,0	43,0	44,0	45,0											
48,0	36,5	37,0	38,0											
52,0	29,8	30,5	31,5											
56,0	25,4	26,1	27,0											
60,0	21,1	21,7	22,6											
64,0	17,3	17,9	18,7											
68,0	15,0	15,5	16,2											
72,0	12,7	13,1	13,6											
76,0	10,8	11,1	11,7											
*** n ***	17	17	17											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SL2D	--	170 t	14.0 x 14.0 m	zz t yy m		
	78m						

ISO DIN

SL2D	--
78m	

074607 *** 259 22.50

m > < t

CODE >8579<

V181 9500

m	78,0	78,0	78,0											
12,0	274,0	274,0	273,0											
14,0	230,0	233,0	237,0											
16,0	200,0	203,0	206,0											
18,0	171,0	173,0	176,0											
20,0	151,0	153,0	156,0											
22,0	134,0	135,0	138,0											
24,0	117,0	118,0	120,0											
26,0	107,0	108,0	110,0											
28,0	97,0	98,0	100,0											
30,0	87,0	88,0	90,0											
32,0	77,0	79,0	80,0											
34,0	71,0	72,0	74,0											
36,0	65,0	66,0	68,0											
38,0	60,0	61,0	62,0											
40,0	54,0	55,0	57,0											
44,0	46,0	46,5	48,0											
48,0	39,0	39,5	41,0											
52,0	32,0	33,0	34,0											
56,0	27,6	28,2	29,2											
60,0	23,0	23,6	24,5											
64,0	19,0	19,6	20,4											
68,0	16,5	17,0	17,7											
72,0	14,0	14,5	15,0											
76,0	12,1	12,5	13,0											
*** n ***	18	18	17											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SL2D	--	190 t	14.0 x 14.0 m	yy m zz t		
	78m						

ISO DIN

SL2D	--
84m	

074607 *** 257 22.50

m > < t

CODE >8584<

V181 9600

m	84,0	84,0	84,0											
12,0	252,0	256,0	261,0											
14,0	212,0	215,0	220,0											
16,0	180,0	182,0	187,0											
18,0	156,0	157,0	161,0											
20,0	134,0	135,0	138,0											
22,0	120,0	121,0	124,0											
24,0	105,0	107,0	110,0											
26,0	93,0	94,0	97,0											
28,0	85,0	86,0	88,0											
30,0	77,0	78,0	80,0											
32,0	69,0	70,0	72,0											
34,0	61,0	62,0	64,0											
36,0	55,0	57,0	58,0											
38,0	51,0	52,0	53,0											
40,0	46,5	47,5	48,5											
44,0	37,5	38,0	39,5											
48,0	31,5	32,0	33,0											
52,0	25,5	26,3	27,4											
56,0	20,1	20,8	21,8											
60,0	17,1	17,7	18,6											
64,0	14,1	14,7	15,3											
68,0	11,3	11,8	12,3											
72,0	9,3	9,7	10,3											
76,0	7,3	7,6	8,4											
80,0	5,6	6,0	6,6											
84,0		5,1	5,6											
*** n ***	16	16	17											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SL2D	--	150 t	14.0 x 14.0 m	yy m zz t		
	84m						

ISO DIN

SL2D	--
84m	

074607 *** 258 22.50

m > < t

CODE >8583<

V181 9600

m	84,0	84,0	84,0											
12,0	263,0	266,0	269,0											
14,0	222,0	224,0	228,0											
16,0	189,0	190,0	195,0											
18,0	163,0	165,0	169,0											
20,0	140,0	142,0	145,0											
22,0	126,0	127,0	130,0											
24,0	111,0	113,0	114,0											
26,0	97,0	99,0	101,0											
28,0	89,0	91,0	92,0											
30,0	81,0	83,0	84,0											
32,0	73,0	74,0	76,0											
34,0	65,0	66,0	67,0											
36,0	59,0	60,0	62,0											
38,0	54,0	55,0	57,0											
40,0	49,5	51,0	52,0											
44,0	40,0	41,0	42,5											
48,0	34,0	35,0	36,0											
52,0	28,1	28,8	29,9											
56,0	22,5	23,2	24,2											
60,0	19,2	19,8	20,7											
64,0	15,9	16,4	17,3											
68,0	12,7	13,2	14,0											
72,0	10,7	11,1	11,9											
76,0	8,6	9,0	9,7											
80,0	6,9	7,3	7,9											
84,0	5,8	6,4	6,8											
*** n ***	17	17	17											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SL2D	--	170 t	14.0 x 14.0 m	zz t yy m		
	84m						

ISO DIN

SL2D	--
84m	

074607 *** 259 22.50

m > < t

CODE >8582<

V181 9600

m	84,0	84,0	84,0											
12,0	272,0	270,0	269,0											
14,0	231,0	231,0	233,0											
16,0	197,0	198,0	202,0											
18,0	170,0	172,0	176,0											
20,0	146,0	148,0	151,0											
22,0	131,0	133,0	136,0											
24,0	116,0	118,0	120,0											
26,0	102,0	104,0	106,0											
28,0	94,0	95,0	97,0											
30,0	85,0	87,0	88,0											
32,0	77,0	78,0	80,0											
34,0	68,0	70,0	71,0											
36,0	62,0	64,0	65,0											
38,0	58,0	59,0	60,0											
40,0	53,0	54,0	55,0											
44,0	43,0	44,0	45,0											
48,0	37,0	37,5	38,5											
52,0	31,0	31,5	32,5											
56,0	25,1	25,7	26,7											
60,0	21,5	22,0	22,9											
64,0	17,9	18,2	19,1											
68,0	14,5	14,7	15,5											
72,0	12,3	12,6	13,3											
76,0	10,2	10,5	11,1											
80,0	8,4	8,7	9,2											
84,0	7,2	7,5	8,0											
*** n ***	17	17	17											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SL2D	--	190 t	14.0 x 14.0 m	yy m zz t		
	84m						

ISO DIN

SL2D	--
90m	

074607 *** 257 22.50

m > < t

CODE >8587<

V181 9700

m	90,0	90,0	90,0											
14,0	208,0	211,0	213,0											
16,0	174,0	177,0	181,0											
18,0	153,0	155,0	159,0											
20,0	131,0	133,0	136,0											
22,0	115,0	118,0	120,0											
24,0	103,0	105,0	108,0											
26,0	91,0	93,0	95,0											
28,0	81,0	83,0	85,0											
30,0	74,0	76,0	77,0											
32,0	67,0	69,0	70,0											
34,0	60,0	62,0	63,0											
36,0	53,0	54,0	56,0											
38,0	48,5	49,5	51,0											
40,0	44,5	45,5	46,5											
44,0	36,5	37,5	38,5											
48,0	29,2	30,0	31,0											
52,0	24,4	25,1	26,0											
56,0	19,6	20,2	21,0											
60,0	15,2	15,8	16,4											
64,0	12,7	13,3	13,9											
68,0	10,2	10,7	11,3											
72,0	7,6	8,2	8,7											
76,0	6,0	6,4	7,0											
80,0			5,2											
*** n ***	13	13	13											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

SL2D	--	150 t	14.0 x 14.0 m	yy m zz t
90m				

ISO DIN

SL2D	--
90m	

074607 *** 258 22.50

m > < t

CODE >8586<

V181 9700

m	90,0	90,0	90,0											
14,0	217,0	219,0	217,0											
16,0	182,0	185,0	189,0											
18,0	160,0	162,0	166,0											
20,0	137,0	140,0	143,0											
22,0	121,0	124,0	126,0											
24,0	109,0	111,0	113,0											
26,0	96,0	98,0	99,0											
28,0	86,0	87,0	88,0											
30,0	78,0	80,0	81,0											
32,0	71,0	73,0	74,0											
34,0	64,0	65,0	67,0											
36,0	57,0	58,0	59,0											
38,0	52,0	53,0	54,0											
40,0	47,5	48,5	50,0											
44,0	39,5	40,0	41,5											
48,0	32,0	32,5	33,5											
52,0	26,7	27,3	28,4											
56,0	21,7	22,1	23,1											
60,0	17,0	17,4	18,3											
64,0	14,4	14,8	15,6											
68,0	11,8	12,2	12,8											
72,0	9,2	9,6	10,1											
76,0	7,4	7,8	8,3											
80,0	5,6	6,0	6,6											
*** n ***	14	14	14											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SL2D	--	170 t	14.0 x 14.0 m	zz t yy m		
	90m						

ISO DIN

SL2D	--
90m	

074607 *** 259 22.50

m > < t

CODE >8585<

V181 9700

m	90,0	90,0	90,0											
14,0	225,0	223,0	220,0											
16,0	190,0	192,0	196,0											
18,0	167,0	169,0	173,0											
20,0	144,0	146,0	149,0											
22,0	127,0	129,0	132,0											
24,0	114,0	116,0	118,0											
26,0	101,0	103,0	104,0											
28,0	90,0	92,0	93,0											
30,0	83,0	84,0	85,0											
32,0	75,0	77,0	78,0											
34,0	68,0	69,0	71,0											
36,0	60,0	62,0	63,0											
38,0	55,0	56,0	57,0											
40,0	51,0	52,0	53,0											
44,0	42,5	43,0	44,5											
48,0	34,5	35,0	36,5											
52,0	29,1	29,7	30,5											
56,0	23,8	24,2	25,2											
60,0	18,9	19,2	20,1											
64,0	16,2	16,5	17,3											
68,0	13,4	13,7	14,5											
72,0	10,6	11,0	11,8											
76,0	8,8	9,1	9,8											
80,0	6,9	7,3	7,8											
84,0	5,2	5,6	6,1											
*** n ***	14	14	14											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SL2D 90m	--	190 t	14.0 x 14.0 m	zz t yy m		

ISO DIN

SL2D	--
96m	

074607 *** 257 22.50

m > < t

CODE >8590<

V181 9800

m	96,0	96,0	96,0											
14,0	204,0	207,0	210,0											
16,0	172,0	175,0	178,0											
18,0	149,0	152,0	155,0											
20,0	130,0	132,0	135,0											
22,0	112,0	114,0	116,0											
24,0	101,0	103,0	105,0											
26,0	90,0	91,0	94,0											
28,0	79,0	80,0	82,0											
30,0	71,0	72,0	74,0											
32,0	65,0	66,0	68,0											
34,0	59,0	60,0	61,0											
36,0	52,0	53,0	55,0											
38,0	46,5	47,5	49,0											
40,0	41,5	42,5	44,0											
44,0	34,0	35,0	36,5											
48,0	27,0	27,8	29,0											
52,0	21,3	22,1	23,2											
56,0	17,6	18,3	19,1											
60,0	13,9	14,5	15,1											
64,0	10,5	11,1	11,5											
68,0	8,3	8,8	9,3											
72,0	6,0	6,6	7,0											
*** n ***	13	13	13											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SL2D	--	150 t	14.0 x 14.0 m	zz t yy m		
	96m						

ISO DIN

SL2D	--
96m	

074607 *** 258 22.50

m > < t

CODE >8589<

V181 9800

m	96,0	96,0	96,0											
14,0	213,0	215,0	214,0											
16,0	180,0	183,0	185,0											
18,0	156,0	159,0	162,0											
20,0	137,0	139,0	142,0											
22,0	117,0	120,0	122,0											
24,0	106,0	108,0	110,0											
26,0	95,0	96,0	98,0											
28,0	83,0	85,0	86,0											
30,0	75,0	76,0	78,0											
32,0	69,0	70,0	71,0											
34,0	62,0	63,0	65,0											
36,0	56,0	57,0	59,0											
38,0	49,5	51,0	52,0											
40,0	44,5	45,5	47,0											
44,0	37,0	38,0	39,5											
48,0	29,8	30,5	32,0											
52,0	23,9	24,6	25,7											
56,0	19,8	20,5	21,5											
60,0	15,7	16,3	17,2											
64,0	12,0	12,6	13,4											
68,0	9,8	10,3	11,0											
72,0	7,5	7,9	8,5											
76,0	5,3	5,6	6,1											
*** n ***	13	14	13											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SL2D 96m	--	170 t	14.0 x 14.0 m	yy m zz t		

ISO DIN

SL2D	--
96m	

074607 *** 259 22.50

m > < t

CODE >8588<

V181 9800

m	96,0	96,0	96,0											
14,0	221,0	220,0	216,0											
16,0	188,0	190,0	191,0											
18,0	163,0	166,0	169,0											
20,0	143,0	145,0	148,0											
22,0	123,0	124,0	128,0											
24,0	111,0	113,0	116,0											
26,0	100,0	101,0	103,0											
28,0	88,0	89,0	91,0											
30,0	79,0	81,0	82,0											
32,0	73,0	74,0	75,0											
34,0	66,0	67,0	69,0											
36,0	60,0	61,0	62,0											
38,0	53,0	54,0	55,0											
40,0	48,0	48,5	50,0											
44,0	40,0	41,0	42,5											
48,0	32,5	33,5	34,5											
52,0	26,4	27,1	28,2											
56,0	22,0	22,7	23,7											
60,0	17,6	18,2	19,1											
64,0	13,6	14,2	15,0											
68,0	11,2	11,8	12,5											
72,0	8,9	9,4	10,0											
76,0	6,5	7,0	7,5											
80,0		5,2	5,7											
*** n ***	14	14	14											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SL2D	--	190 t	14.0 x 14.0 m	zz t yy m		
	96m						

ISO DIN

SL2D	--
102m	

074607 *** 257 22.50

m > < t

CODE >8593<

V181 9900

m	102,0	102,0	102,0											
14,0	199,0	202,0	205,0											
16,0	171,0	173,0	177,0											
18,0	146,0	147,0	151,0											
20,0	129,0	130,0	133,0											
22,0	112,0	113,0	115,0											
24,0	98,0	99,0	101,0											
26,0	88,0	89,0	91,0											
28,0	78,0	79,0	81,0											
30,0	68,0	69,0	71,0											
32,0	62,0	63,0	65,0											
34,0	56,0	58,0	59,0											
36,0	51,0	52,0	54,0											
38,0	45,5	46,5	48,0											
40,0	40,0	41,0	42,5											
44,0	32,5	33,0	34,5											
48,0	25,8	26,5	27,5											
52,0	19,4	19,9	20,8											
56,0	15,3	15,8	16,6											
60,0	12,2	12,7	13,5											
64,0	9,0	9,6	10,4											
68,0	6,3	6,8	7,6											
72,0			5,5											
*** n ***	12	13	13											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SL2D 102m	--	150 t	14.0 x 14.0 m	yy m zz t		

ISO DIN

SL2D	--
102m	

074607 *** 258 22.50

m > < t

CODE >8592<

V181 9900

m	102,0	102,0	102,0											
14,0	208,0	210,0	206,0											
16,0	179,0	181,0	181,0											
18,0	153,0	154,0	158,0											
20,0	135,0	136,0	140,0											
22,0	117,0	118,0	121,0											
24,0	102,0	104,0	107,0											
26,0	92,0	94,0	96,0											
28,0	82,0	84,0	86,0											
30,0	72,0	73,0	75,0											
32,0	66,0	67,0	69,0											
34,0	60,0	61,0	63,0											
36,0	55,0	56,0	57,0											
38,0	49,0	50,0	51,0											
40,0	43,5	44,0	45,5											
44,0	35,0	36,0	37,0											
48,0	28,2	29,0	30,0											
52,0	21,3	22,1	23,2											
56,0	17,1	17,8	18,8											
60,0	14,0	14,6	15,4											
64,0	10,9	11,3	12,0											
68,0	8,0	8,4	9,0											
72,0	6,0	6,3	6,9											
*** n ***	13	13	13											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SL2D 102m	--	170 t	14.0 x 14.0 m	zz t yy m		

ISO DIN

SL2D	--
102m	

074607 *** 259 22.50

m > < t

CODE >8591<

V181 9900

m	102,0	102,0	102,0											
14,0	214,0	211,0	206,0											
16,0	186,0	185,0	185,0											
18,0	160,0	161,0	165,0											
20,0	141,0	143,0	146,0											
22,0	122,0	124,0	127,0											
24,0	108,0	110,0	112,0											
26,0	97,0	99,0	101,0											
28,0	87,0	88,0	90,0											
30,0	76,0	78,0	79,0											
32,0	70,0	71,0	73,0											
34,0	64,0	65,0	67,0											
36,0	58,0	59,0	61,0											
38,0	52,0	53,0	55,0											
40,0	46,5	47,5	49,0											
44,0	38,0	39,0	40,0											
48,0	31,0	32,0	33,0											
52,0	24,0	24,8	25,9											
56,0	19,5	20,2	21,2											
60,0	16,0	16,6	17,5											
64,0	12,6	13,0	13,7											
68,0	9,5	9,9	10,5											
72,0	7,4	7,8	8,3											
76,0	5,2	5,6	6,2											
*** n ***	13	13	13											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SL2D 102m	--	190 t	14.0 x 14.0 m	yy m zz t		

ISO DIN

SL2D	--
108m	

074607 *** 257 22.50

m > < t

CODE >8596<

V181 9A00

m	108,0	108,0	108,0											
16,0	168,0	170,0	170,0											
18,0	143,0	145,0	148,0											
20,0	126,0	128,0	131,0											
22,0	110,0	112,0	115,0											
24,0	95,0	97,0	99,0											
26,0	85,0	87,0	89,0											
28,0	77,0	78,0	80,0											
30,0	68,0	69,0	71,0											
32,0	59,0	60,0	62,0											
34,0	54,0	55,0	57,0											
36,0	49,0	50,0	52,0											
38,0	44,0	45,5	47,0											
40,0	39,0	40,0	42,0											
44,0	29,9	31,0	32,0											
48,0	24,4	25,3	26,4											
52,0	19,0	19,7	20,6											
56,0	13,5	14,2	14,9											
60,0	10,7	11,4	12,0											
64,0	8,0	8,6	9,2											
68,0	5,2	5,8	6,4											
*** n ***	10	11	11											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SL2D	--	150 t	14.0 x 14.0 m	yy m zz t		
	108m						

ISO DIN

SL2D	--
108m	

074607 *** 258 22.50

m > < t

CODE >8595<

V181 9A00

m	108,0	108,0	108,0											
16,0	175,0	174,0	173,0											
18,0	150,0	152,0	154,0											
20,0	132,0	134,0	137,0											
22,0	116,0	118,0	121,0											
24,0	100,0	102,0	104,0											
26,0	90,0	92,0	94,0											
28,0	81,0	83,0	85,0											
30,0	72,0	73,0	75,0											
32,0	63,0	64,0	66,0											
34,0	58,0	59,0	61,0											
36,0	53,0	54,0	56,0											
38,0	47,5	48,5	50,0											
40,0	42,5	43,5	45,0											
44,0	33,0	34,0	35,5											
48,0	27,1	27,9	29,2											
52,0	21,3	22,0	23,0											
56,0	15,5	16,2	16,9											
60,0	12,5	13,2	13,9											
64,0	9,7	10,2	11,0											
68,0	6,8	7,2	8,0											
72,0			5,6											
*** n ***	11	11	11											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

SL2D	--
108m	

170 t

14.0 x 14.0 m

zz t

yy m

ISO DIN

SL2D	--
108m	

074607 *** 259 22.50

m > < t

CODE >8594<

V181 9A00

m	108,0	108,0	108,0											
16,0	177,0	177,0	176,0											
18,0	156,0	157,0	160,0											
20,0	138,0	140,0	144,0											
22,0	122,0	124,0	127,0											
24,0	105,0	107,0	110,0											
26,0	95,0	97,0	99,0											
28,0	86,0	87,0	89,0											
30,0	76,0	78,0	80,0											
32,0	67,0	68,0	70,0											
34,0	62,0	63,0	64,0											
36,0	56,0	58,0	59,0											
38,0	51,0	52,0	54,0											
40,0	46,0	47,0	48,5											
44,0	36,0	37,0	38,0											
48,0	29,9	30,5	32,0											
52,0	23,7	24,2	25,4											
56,0	17,5	17,9	19,0											
60,0	14,4	14,8	15,8											
64,0	11,4	11,9	12,7											
68,0	8,3	8,9	9,6											
72,0	5,8	6,4	6,9											
*** n ***	11	11	11											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SL2D 108m	--	190 t	14.0 x 14.0 m	zz t yy m		

ISO DIN

SL2D	--
114m	

074607 *** 257 22.50

m > < t

CODE >8599<

V181 9B00

m	114,0	114,0	114,0											
16,0	161,0	159,0	158,0											
18,0	141,0	142,0	143,0											
20,0	123,0	126,0	128,0											
22,0	109,0	112,0	114,0											
24,0	96,0	97,0	100,0											
26,0	84,0	85,0	88,0											
28,0	76,0	77,0	79,0											
30,0	68,0	69,0	71,0											
32,0	60,0	61,0	63,0											
34,0	53,0	54,0	55,0											
36,0	48,0	49,0	51,0											
38,0	43,5	44,5	46,0											
40,0	39,0	40,0	41,5											
44,0	29,8	30,5	32,0											
48,0	23,3	24,1	25,4											
52,0	18,7	19,4	20,5											
56,0	14,1	14,6	15,7											
60,0	10,0	10,5	11,4											
64,0	7,5	8,0	8,8											
68,0	5,0	5,5	6,2											
*** n ***	10	10	10											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SL2D	--	150 t	14.0 x 14.0 m	yy m zz t		
	114m						

ISO DIN

SL2D	--
114m	

074607 *** 258 22.50

m > < t

CODE >8598<

V181 9B00

m	114,0	114,0	114,0											
16,0	162,0	161,0	159,0											
18,0	145,0	146,0	147,0											
20,0	129,0	132,0	134,0											
22,0	115,0	117,0	120,0											
24,0	101,0	103,0	105,0											
26,0	88,0	90,0	92,0											
28,0	80,0	82,0	84,0											
30,0	72,0	73,0	75,0											
32,0	64,0	65,0	67,0											
34,0	56,0	57,0	59,0											
36,0	52,0	53,0	54,0											
38,0	47,0	48,0	49,5											
40,0	42,0	43,5	45,0											
44,0	33,0	34,0	35,0											
48,0	26,1	26,9	28,1											
52,0	21,1	21,8	22,9											
56,0	16,2	16,8	17,7											
60,0	11,9	12,3	13,1											
64,0	9,3	9,7	10,5											
68,0	6,6	7,0	7,8											
72,0			5,2											
*** n ***	10	10	10											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

SL2D	--
114m	

170 t

14.0 x 14.0 m

zz t

yy m

ISO DIN

SL2D	--
114m	

074607 *** 259 22.50

m > < t

CODE >8597<

V181 9B00

m	114,0	114,0	114,0											
16,0	163,0	162,0	161,0											
18,0	149,0	150,0	152,0											
20,0	135,0	138,0	141,0											
22,0	120,0	123,0	126,0											
24,0	106,0	108,0	110,0											
26,0	93,0	95,0	97,0											
28,0	85,0	86,0	88,0											
30,0	76,0	78,0	79,0											
32,0	68,0	69,0	71,0											
34,0	60,0	61,0	63,0											
36,0	55,0	56,0	58,0											
38,0	50,0	51,0	53,0											
40,0	45,5	46,5	48,0											
44,0	36,0	37,0	38,5											
48,0	28,8	29,7	31,0											
52,0	23,5	24,3	25,3											
56,0	18,2	18,9	19,8											
60,0	13,6	14,2	14,9											
64,0	10,9	11,4	12,1											
68,0	8,2	8,7	9,4											
72,0	5,5	5,9	6,6											
*** n ***	10	10	10											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SL2D	--	190 t	14.0 x 14.0 m	yy m zz t		
	114m						

ISO DIN

SL2D	--
120m	

074607 *** 257 22.50

m > < t

CODE >8602<

V181 9C00

m	120,0	120,0	120,0											
16,0	147,0	145,0	144,0											
18,0	133,0	134,0	134,0											
20,0	120,0	122,0	125,0											
22,0	107,0	109,0	112,0											
24,0	95,0	96,0	99,0											
26,0	82,0	84,0	86,0											
28,0	74,0	75,0	77,0											
30,0	66,0	68,0	70,0											
32,0	59,0	60,0	62,0											
34,0	52,0	53,0	55,0											
36,0	46,0	47,0	49,0											
38,0	42,0	43,0	44,5											
40,0	37,5	38,5	40,0											
44,0	29,1	30,0	31,5											
48,0	20,8	21,7	23,1											
52,0	17,0	17,8	19,0											
56,0	13,3	14,0	14,9											
60,0	9,6	10,1	10,8											
64,0	6,8	7,2	7,7											
68,0		5,1	5,5											
*** n ***	9	9	9											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SL2D	--	150 t	14.0 x 14.0 m	yy m zz t		
	120m						

ISO DIN

SL2D	--
120m	

074607 *** 258 22.50

m > < t

CODE >8601<

V181 9C00

m	120,0	120,0	120,0											
16,0	147,0	146,0	144,0											
18,0	136,0	137,0	137,0											
20,0	125,0	128,0	131,0											
22,0	113,0	115,0	117,0											
24,0	100,0	102,0	104,0											
26,0	87,0	89,0	91,0											
28,0	78,0	80,0	81,0											
30,0	71,0	72,0	74,0											
32,0	63,0	65,0	66,0											
34,0	56,0	57,0	59,0											
36,0	49,5	51,0	52,0											
38,0	45,0	46,5	48,0											
40,0	41,0	42,0	43,5											
44,0	32,5	33,5	35,0											
48,0	23,8	24,7	26,0											
52,0	19,6	20,4	21,6											
56,0	15,5	16,1	17,2											
60,0	11,3	11,8	12,8											
64,0	8,1	8,6	9,4											
68,0	5,8	6,2	7,0											
*** n ***	9	9	9											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SL2D 120m	--	170 t	14.0 x 14.0 m	yy m zz t		

ISO DIN

SL2D	--
120m	

074607 *** 259 22.50

m > < t

CODE >8600<

V181 9C00

m	120,0	120,0	120,0											
16,0	147,0	146,0	145,0											
18,0	139,0	140,0	141,0											
20,0	131,0	133,0	137,0											
22,0	118,0	120,0	123,0											
24,0	105,0	107,0	110,0											
26,0	92,0	94,0	96,0											
28,0	83,0	84,0	86,0											
30,0	75,0	76,0	78,0											
32,0	67,0	68,0	70,0											
34,0	59,0	61,0	62,0											
36,0	53,0	54,0	56,0											
38,0	48,5	49,5	51,0											
40,0	44,0	45,5	47,0											
44,0	35,5	36,5	38,0											
48,0	26,7	27,6	28,9											
52,0	22,2	23,0	24,1											
56,0	17,7	18,4	19,3											
60,0	13,2	13,8	14,6											
64,0	9,8	10,3	11,0											
68,0	7,4	7,8	8,5											
72,0	5,0	5,4	6,0											
*** n ***	9	9	9											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SL2D	--	190 t	14.0 x 14.0 m	yy m zz t		
	120m						

ISO DIN

SL2D	--
126m	

074607 *** 257 22.50

m > < t

CODE >8605<

V181 9D00

m	126,0	126,0	126,0											
18,0	123,0	124,0	124,0											
20,0	116,0	117,0	120,0											
22,0	106,0	108,0	111,0											
24,0	94,0	96,0	99,0											
26,0	83,0	84,0	87,0											
28,0	72,0	74,0	76,0											
30,0	65,0	67,0	69,0											
32,0	59,0	60,0	62,0											
34,0	52,0	54,0	55,0											
36,0	45,5	47,0	48,5											
38,0	41,0	42,0	43,5											
40,0	37,0	38,0	39,5											
44,0	29,4	30,0	31,5											
48,0	21,7	22,3	23,5											
52,0	16,0	16,6	17,7											
56,0	12,7	13,2	14,2											
60,0	9,3	9,8	10,7											
64,0	6,0	6,4	7,2											
68,0			5,3											
*** n ***	8	8	8											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SL2D	--	150 t	14.0 x 14.0 m	yy m zz t		
	126m						

ISO DIN

SL2D	--
126m	

074607 *** 258 22.50

m > < t

CODE >8604<

V181 9D00

m	126,0	126,0	126,0											
18,0	126,0	126,0	126,0											
20,0	120,0	122,0	124,0											
22,0	111,0	113,0	116,0											
24,0	99,0	101,0	104,0											
26,0	88,0	89,0	92,0											
28,0	76,0	78,0	80,0											
30,0	70,0	71,0	73,0											
32,0	63,0	64,0	66,0											
34,0	56,0	57,0	59,0											
36,0	49,0	50,0	52,0											
38,0	44,0	45,5	47,0											
40,0	40,0	41,0	43,0											
44,0	32,0	33,0	34,5											
48,0	24,0	24,9	26,3											
52,0	18,1	18,9	20,2											
56,0	14,6	15,3	16,4											
60,0	11,2	11,7	12,6											
64,0	7,7	8,1	8,8											
68,0	5,7	6,0	6,5											
*** n ***	8	8	8											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SL2D	--	170 t	14.0 x 14.0 m	zz t yy m		
	126m						

ISO DIN

SL2D	--
126m	

074607 *** 259 22.50

m > < t

CODE >8603<

V181 9D00

m	126,0	126,0	126,0											
18,0	127,0	128,0	128,0											
20,0	124,0	126,0	128,0											
22,0	116,0	119,0	121,0											
24,0	104,0	106,0	109,0											
26,0	92,0	94,0	96,0											
28,0	81,0	82,0	85,0											
30,0	74,0	75,0	77,0											
32,0	67,0	68,0	70,0											
34,0	60,0	61,0	63,0											
36,0	53,0	54,0	55,0											
38,0	47,5	48,5	50,0											
40,0	43,5	44,5	46,0											
44,0	35,0	36,0	37,5											
48,0	27,0	27,9	29,3											
52,0	20,8	21,6	22,9											
56,0	17,0	17,7	18,8											
60,0	13,1	13,7	14,7											
64,0	9,3	9,7	10,6											
68,0	6,9	7,2	7,9											
72,0		5,1	5,7											
*** n ***	8	8	8											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SL2D	--	190 t	14.0 x 14.0 m	zz t yy m		
	126m						

ISO DIN

SL2D	--
132m	

074607 *** 257 22.50

m > < t

CODE >8608<

V181 9E00

m	132,0	132,0	132,0											
18,0	110,0	111,0	111,0											
20,0	107,0	108,0	110,0											
22,0	102,0	104,0	107,0											
24,0	92,0	94,0	97,0											
26,0	82,0	83,0	86,0											
28,0	71,0	73,0	75,0											
30,0	64,0	65,0	67,0											
32,0	58,0	59,0	61,0											
34,0	52,0	53,0	55,0											
36,0	45,5	47,0	48,5											
38,0	39,5	40,5	42,5											
40,0	36,0	37,0	38,5											
44,0	29,0	29,9	31,0											
48,0	22,2	22,9	23,9											
52,0	15,4	15,8	16,7											
56,0	12,0	12,5	13,2											
60,0	8,9	9,4	10,1											
64,0	5,9	6,3	6,9											
*** n ***	7	7	7											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SL2D 132m	--	150 t	14.0 x 14.0 m	yy m zz t		

ISO DIN

SL2D	--
132m	

074607 *** 258 22.50

m > < t

CODE >8607<

V181 9E00

m	132,0	132,0	132,0											
18,0	112,0	113,0	112,0											
20,0	110,0	112,0	112,0											
22,0	107,0	110,0	110,0											
24,0	97,0	99,0	100,0											
26,0	86,0	88,0	90,0											
28,0	76,0	77,0	79,0											
30,0	68,0	69,0	71,0											
32,0	61,0	63,0	65,0											
34,0	55,0	57,0	58,0											
36,0	49,0	50,0	52,0											
38,0	43,0	44,0	45,5											
40,0	39,0	40,0	41,5											
44,0	31,5	32,5	34,0											
48,0	24,4	25,4	26,4											
52,0	17,2	18,1	18,8											
56,0	13,7	14,4	15,2											
60,0	10,6	11,2	11,9											
64,0	7,4	7,9	8,7											
68,0			5,6											
*** n ***	7	7	7											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SL2D	--	170 t	14.0 x 14.0 m	zz t yy m		
	132m						

ISO DIN

SL2D	--
132m	

074607 *** 259 22.50

m > < t

CODE >8606<

V181 9E00

m	132,0	132,0	132,0											
18,0	112,0	113,0	112,0											
20,0	111,0	113,0	112,0											
22,0	109,0	111,0	110,0											
24,0	99,0	101,0	101,0											
26,0	90,0	91,0	92,0											
28,0	80,0	82,0	83,0											
30,0	72,0	74,0	75,0											
32,0	65,0	67,0	69,0											
34,0	59,0	60,0	62,0											
36,0	53,0	54,0	55,0											
38,0	46,0	47,0	49,0											
40,0	42,0	43,0	44,5											
44,0	34,5	35,5	37,0											
48,0	26,8	27,7	28,9											
52,0	19,3	20,0	21,1											
56,0	15,6	16,3	17,3											
60,0	12,3	12,9	13,9											
64,0	9,1	9,6	10,5											
68,0	5,9	6,3	7,2											
72,0			5,5											
*** n ***	7	7	7											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SL2D	--	190 t	14.0 x 14.0 m	yy m zz t		
	132m						

ISO DIN

SL2D	--
138m	

074607 *** 257 22.50

m > < t

CODE >8611<

V181 9F00

m	138,0	138,0	138,0											
18,0	96,0	98,0	98,0											
20,0	95,0	98,0	98,0											
22,0	94,0	97,0	97,0											
24,0	88,0	90,0	91,0											
26,0	79,0	81,0	82,0											
28,0	70,0	72,0	74,0											
30,0	62,0	64,0	66,0											
32,0	56,0	58,0	60,0											
34,0	51,0	52,0	54,0											
36,0	45,0	46,5	48,0											
38,0	39,5	40,5	42,5											
40,0	34,0	35,0	37,0											
44,0	27,9	28,9	30,5											
48,0	22,0	22,7	24,1											
52,0	16,0	16,5	17,7											
56,0	11,1	11,5	12,6											
60,0	8,3	8,7	9,7											
64,0	5,4	6,0	6,7											
*** n ***	6	6	6											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SL2D 138m	--	150 t	14.0 x 14.0 m	yy m zz t		

ISO DIN

SL2D	--
138m	

074607 *** 258 22.50

m > < t

CODE >8610<

V181 9F00

m	138,0	138,0	138,0											
18,0	96,0	98,0	98,0											
20,0	95,0	98,0	98,0											
22,0	94,0	97,0	97,0											
24,0	89,0	91,0	92,0											
26,0	81,0	83,0	84,0											
28,0	73,0	75,0	77,0											
30,0	66,0	68,0	70,0											
32,0	60,0	62,0	64,0											
34,0	54,0	56,0	58,0											
36,0	48,5	50,0	52,0											
38,0	43,0	44,0	46,0											
40,0	37,5	38,5	40,5											
44,0	31,0	32,0	33,5											
48,0	24,5	25,3	26,8											
52,0	18,1	18,7	20,0											
56,0	13,0	13,4	14,6											
60,0	10,0	10,5	11,5											
64,0	7,1	7,6	8,4											
68,0			5,4											
*** n ***	6	6	6											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SL2D	--	170 t	14.0 x 14.0 m	zz t yy m		
	138m						

ISO DIN

SL2D	--
138m	

074607 *** 259 22.50

m > < t

CODE >8609<

V181 9F00

m	138,0	138,0	138,0											
18,0	96,0	98,0	98,0											
20,0	95,0	98,0	98,0											
22,0	94,0	97,0	97,0											
24,0	89,0	92,0	93,0											
26,0	83,0	85,0	86,0											
28,0	76,0	78,0	80,0											
30,0	70,0	72,0	74,0											
32,0	64,0	66,0	68,0											
34,0	58,0	60,0	62,0											
36,0	52,0	54,0	56,0											
38,0	46,5	47,5	49,5											
40,0	41,0	42,0	43,5											
44,0	34,0	35,0	36,5											
48,0	27,2	28,0	29,2											
52,0	20,4	21,0	22,0											
56,0	15,0	15,4	16,3											
60,0	11,9	12,3	13,1											
64,0	8,9	9,2	10,0											
68,0	5,8	6,1	6,8											
*** n ***	6	6	6											
yy	13,0	15,0	18,0											
m/s	12,8	12,8	12,8											

	SL2D	--	190 t	14.0 x 14.0 m	yy m zz t		
	138m						