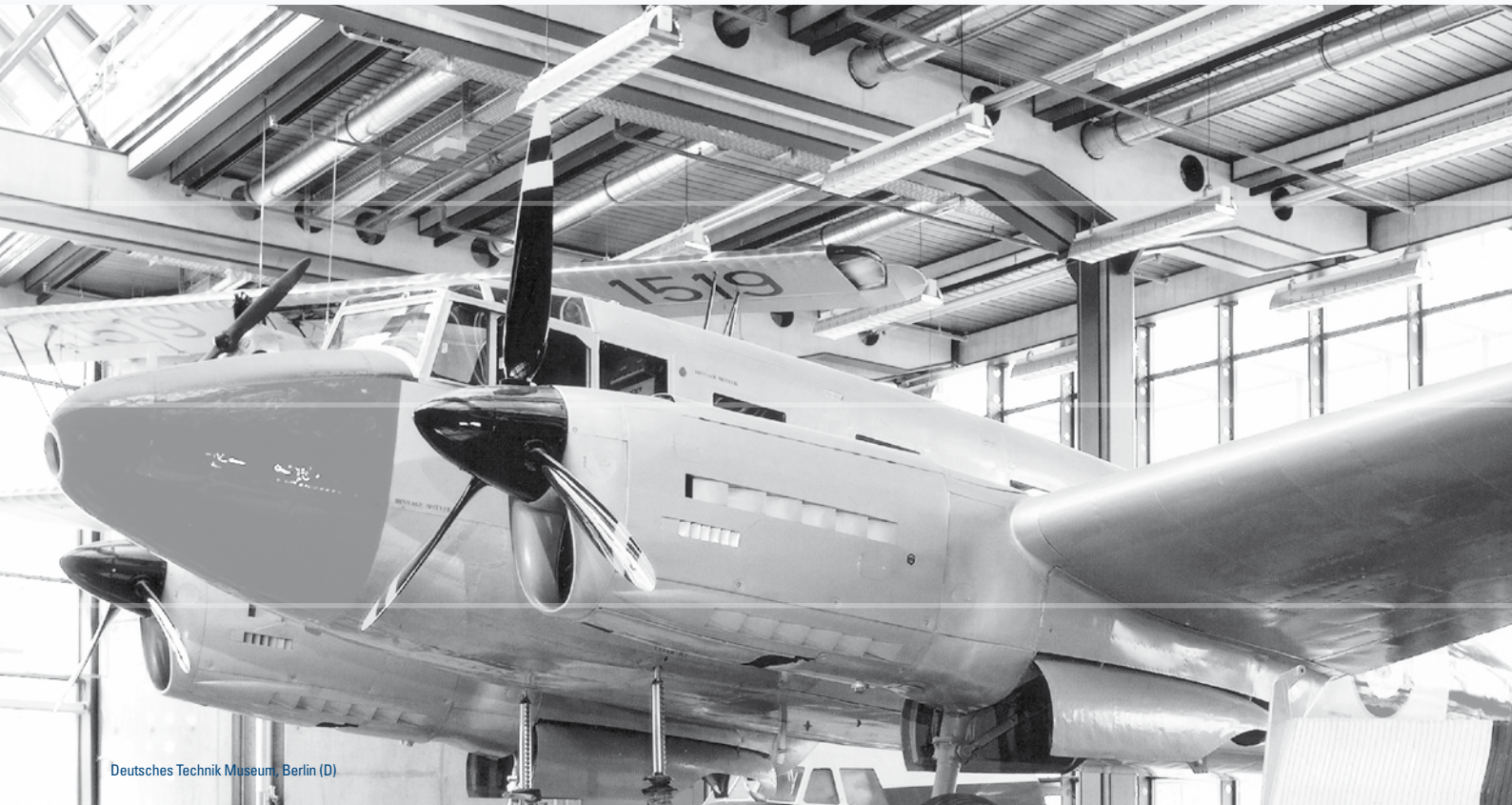




HOLORIB®/SUPERHOLORIB®. STATIK. STATIQUE. STATICA. STATICS.

**BEMESSUNGSTABELLEN. TABLEAUX DE CHARGE.
TABELLE DI CARICO. LOAD TABLES.**



Deutsches Technik Museum, Berlin (D)



Satellitenterminal; Flughafen München (D)

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HOLORIB®

Normalbeton/Béton normal/Calcestruzzo normale/Normal concrete C25/30

- HR 51, 0.75 mm
- HR 51, 0.88 mm
- HR 51, 1.00 mm

9 ●

10 ●

11 ●

SUPERHOLORIB®

Normalbeton/Béton normal/Calcestruzzo normale/Normal concrete C25/30

- SHR 51, 0.75 mm
- SHR 51, 0.88 mm
- SHR 51, 1.00 mm
- SHR 51, 1.25 mm

12 ●

13 ●

14 ●

15 ●

SUPERHOLORIB®

Leichtbeton/Béton léger/Calcestruzzo leggero/Light concrete LC25/28

- SHR 51, 0.75 mm
- SHR 51, 0.88 mm
- SHR 51, 1.00 mm
- SHR 51, 1.25 mm

16 ●

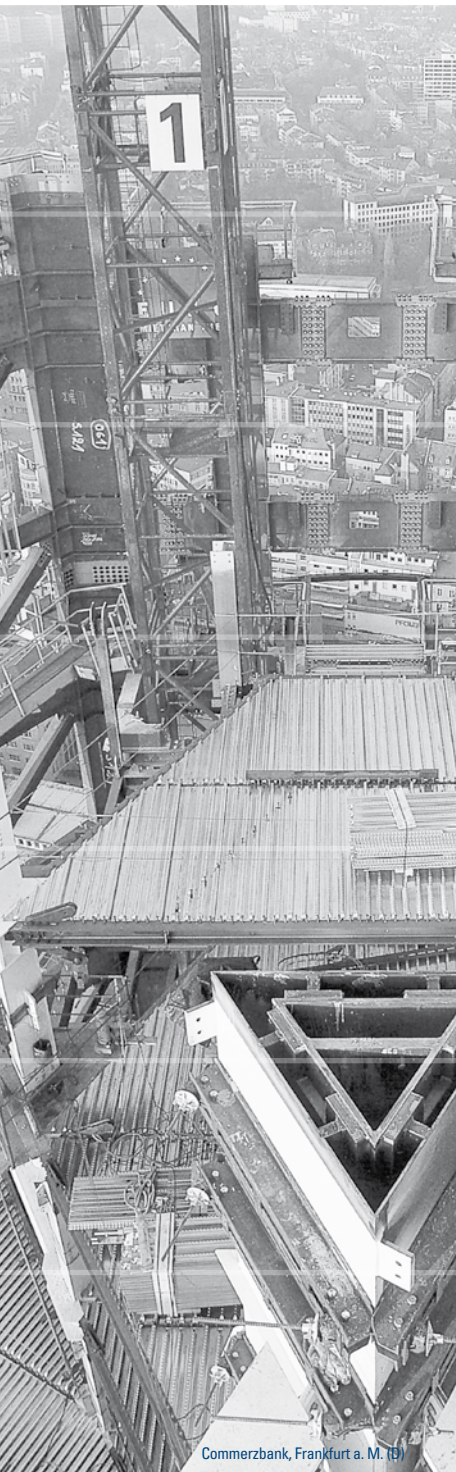
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Commerzbank, Frankfurt a. M. (19)



ALLGEMEINE HINWEISE ZU DEN TABELLEN

Die nachfolgenden Tabellen dienen zur statischen Vordimensionierung der HOLORIB®-/SUPERHOLORIB®-Verbunddeckenprofile. Hierbei werden folgende Kombinationen berücksichtigt:

- HOLORIB® HR51 in den Blechdicken 0,75 / 0,88 / 1,00 mm in Verbindung mit Normalbeton der Festigkeitsklasse C25/30
- SUPERHOLORIB® SHR51 in den Blechdicken 0,75 / 0,88 / 1,00 / 1,25 mm in Verbindung mit Normalbeton der Festigkeitsklasse C25/30
- SUPERHOLORIB® SHR51 in den Blechdicken 0,75 / 0,88 / 1,00 / 1,25 mm in Verbindung mit Leichtbeton der Festigkeitsklasse LC25/28

Die Tabellen geben in Abhängigkeit der Gesamtdeckenstärke, der Spannweiten und des statischen Systems (Ein-, Zweier oder Dreifeldträgersystem) an, mit welchem Nutzlastniveau (NL) die Decke im ausgehärteten Zustand (Endzustand) belastet werden kann. Die Angaben sind als untere Abschätzung des Nutzlastniveaus anzusehen. Durch Zugabe eines grösseren Bewehrungsquerschnitts lassen sich die Nutzlasten noch weiter steigern. Darüber hinaus ist den Tabellen die Anzahl der notwendigen Montageunterstützungen während des Betonierens (Bauzustand) zu entnehmen.

Die Angaben in den Tabellen basieren für den Bauzustand auf den nachfolgend aufgeführten Berechnungsgrundlagen:

- Statische Querschnitts- und Bemessungswerte der Verbundprofile nach DIN EN 1993-1-3
- Durchbiegungsbegrenzung unter Ansatz des Eigengewichts (EG) von Blech und Beton mit L/180 (die erhöhte Betonmenge, das daraus resultierende Mehrgewicht und folglich eine höhere Durchbiegung werden dabei mit berücksichtigt)
- Berücksichtigung von gleichmässig verteilten Betriebslasten (Verkehrslast) während des Betonierens von 0,75 kN/m² gemäss EN 1991-1-6. Zusätzlich wird eine lokale Betriebslast von 0,75 kN/m², verteilt auf eine Fläche von 3,0 x 3,0 m, angesetzt.
- Nachweis hinsichtlich elastischer Tragfähigkeit und Traglast unter Berücksichtigung der zuvor aufgeführten Belastungen aus Eigengewichten und Betriebslasten.
- Der Nachweis der Traglast im Bauzustand erfolgt mit den Sicherheitsfaktoren 1,35 für ständige Lasten (Eigengewicht Blech und Beton) und 1,50 für veränderliche Lasten (Verkehrs- und Betriebslasten).

INDICATIONS GÉNÉRALES SUR LES TABLEAUX DE CHARGES

Les tableaux ci-dessous servent au prédimensionnement statique des profils pour dalles mixtes HOLORIB®/SUPERHOLORIB®. Les combinaisons suivantes ont ainsi été prises en considération:

- HOLORIB® HR51 avec épaisseur de tôle de 0,75 / 0,88 / 1,00 mm, en combinaison avec un béton normal de la classe de résistance C25/30
- SUPERHOLORIB® SHR51 avec épaisseur de tôle de 0,75 / 0,88 / 1,00 / 1,25 mm, en combinaison avec un béton normal de la classe de résistance C25/30
- SUPERHOLORIB® SHR51 avec épaisseur de tôle de 0,75 / 0,88 / 1,00 / 1,25 mm, en combinaison avec un béton léger de la classe de résistance LC25/28

En fonction de l'épaisseur totale du plancher, des portées et du système statique (système à une, deux ou trois travées), les tableaux indiquent le niveau de charge utile (CU) auquel le plancher peut être soumis à l'état durci (stade définitif). Ces indications sont à prendre comme estimation minimale de charge utile. Les tableaux indiquent en outre le nombre d'étais requis pour le bétonnage (phase de construction).

Les données des tableaux reposent sur les bases de calcul détaillées ci-dessous pour les phases de construction:

- Caractéristiques de section et valeurs statiques pour les phases de construction des profils mixtes, déterminées selon la norme DIN EN 1993-1-3
- Flèche limite selon le poids propre (PP) de la tôle et du béton avec L/180 (la quantité accrue de béton et le surplus de poids afférent engendré par la flèche sont pris en considération)
- Prise en compte de charges d'exploitation (charge mobile) uniformément distribuées lors du bétonnage de 0,75 kN/m² selon la norme EN 1991-1-6. Une charge d'exploitation locale de 0,75 kN/m² est également appliquée, répartie sur une surface de 3,0 x 3,0 m.
- Vérification des profils mixtes quant à la capacité portante élastique et la charge maximale d'utilisation (CMU), prenant en compte les contraintes décrites ci-dessus engendrées par le poids propre et les charges d'exploitation.
- La vérification de la CMU à l'état de construction est effectuée avec les coefficients de sécurité de 1,35 pour les charges constantes (poids propre de la tôle et du béton) et de 1,50 pour les charges variables (charges mobiles et d'exploitation).

INDICAZIONI GENERALI SULLE TABELLE DI CARICO

Le seguenti tabelle servono per il dimensionamento statico preliminare dei profilati per solai misti HOLORIB®/SUPERHOLORIB®. Vengono prese in considerazione le seguenti combinazioni:

- HOLORIB® HR51 con lamiera di spessore 0,75 / 0,88 / 1,00 mm combinato con calcestruzzo normale di classe di resistenza C25/30
- SUPERHOLORIB® SHR51 con lamiera di spessore 0,75 / 0,88 / 1,00 / 1,25 mm combinato con calcestruzzo normale di classe di resistenza C25/30
- SUPERHOLORIB® SHR51 con lamiera di spessore 0,75 / 0,88 / 1,00 / 1,25 mm combinato con calcestruzzo leggero di classe LC25/28

Le tabelle indicano, in relazione allo spessore complessivo del solaio, alle ampiezze di campata e al sistema statico (ad una, due o tre campate), quale sia il livello di carico utile (Q) che il solaio indurito (condizioni definitive) è in grado di reggere. I valori devono essere considerati come stima minima del livello di carico utile. Aumentando la sezione dell'armatura, si possono incrementare i livelli di carico utile. Dalla tabelle si evince inoltre il numero di sostegni di montaggio necessari durante la gettata (fase di costruzione).

Le indicazioni delle tabelle si avvalgono delle basi di calcolo riportate di seguito per la fase di costruzione:

- Valori delle sezioni e misurazioni statiche dei profilati per solai misti per la fase di costruzione, rilevati a norma DIN EN 1993-1-3
- Limite di freccia per sollecitazione con peso proprio (PP) di lamiera e calcestruzzo con L/180 (vengono presi in considerazione anche la maggiore quantità di cls e il maggiore peso risultante e compresa la maggior lesione)
- Viene tenuto conto di carichi di esercizio ripartiti uniformemente (carico utile) nel corso della gettata di 0,75 kN/m² a norma EN 1991-1-6. Inoltre viene calcolato un carico di esercizio di 0,75 kN/m², distribuito su una superficie di 3,0 x 3,0 m.
- Verifica dei profilati per solai misti relativamente alla portata elastica e al carico limite, tenendo conto dei carichi sopra riportati, derivanti da peso proprio e carichi di esercizio.
- La verifica del carico limite in fase di costruzione avviene con fattore di sicurezza 1,35 per carichi permanenti (peso proprio di lamiera e cls) e 1,50 per carichi variabili (carichi variabili e di esercizio).

GENERAL INFORMATION REGARDING THE LOAD TABLES

The following tables are used for the static predimensioning of the HOLORIB®/SUPERHOLORIB® composite floor profiles. The following combinations are taken into account here:

- HOLORIB® HR51 in the sheet thicknesses 0,75 / 0,88 / 1,00 mm in conjunction with normal weight concrete C25/30
- SUPERHOLORIB® SHR51 in the sheet thicknesses 0,75 / 0,88 / 1,00 / 1,25 mm in conjunction with normal weight concrete C25/30
- SUPERHOLORIB® SHR51 in the sheet thicknesses 0,75 / 0,88 / 1,00 / 1,25 mm in conjunction with lightweight concrete LC25/28

In relation to the total floor thickness, the spans and the static system (single, double or treble span), the tables indicate the minimum service load that the floor can bear in the composite state (final state). The specifications should be regarded as the lower estimation of the service load level. The service loads can be further increased by the addition of a larger reinforcement cross-section. Beyond that, the number of temporary props necessary during the concreting (construction state) is to be taken from the table.

The data in the tables are based on the calculation principles for the construction state listed below:

- Static cross-sectional and dimensioning values for the construction state of the composite profiles determined according to DIN EN 1993-1-3
- Deflection limitation based on the dead weight of sheet metal and concrete with L/180 (the increased quantity of concrete and the resulting extra weight due to the deflection is thereby taken into account)
- Accounting for evenly distributed live loads (traffic loads) during concreting of 0,75 kN/m² according to EN 1991-1-6. In addition, a local live load (traffic load) of 0,75 kN/m² is applied, distributed over an area of 3,0 x 3,0 m.
- Verification of the composite profiles with regard to elastic load-bearing capacity and load, taking into account the previously listed loads resulting from dead weights and live loads.
- The verification of the load in the construction state is done with the safety factor of 1.35 for constant loads (dead weight of sheet metal and concrete) and 1.50 for variable loads (live and traffic loads).

Für den Endzustand werden folgende Berechnungsgrundlagen angesetzt:

- Ansatz der mechanischen Verbundwirkung zwischen Blech und Beton durch hinterschnittende Rippenform, Noppen im Obergurt der SHR-Profile sowie Verwendung von Blechverformungsankern (BVA).
- Die Berechnungen erfolgen generell nach dem Teilverbundverfahren. Als Berechnungsoption wird entweder die «Einfeldträgerkette», welche als Vorstufe zur Fließgelenktheorie betrachtet werden kann, oder das Verfahren «Momentenumlagerung» gewählt.
- Das Durchbiegungskriterium im Endzustand wird mit L/350 für die Lastfallkombination 1.0 EG + 0.5 NL definiert. Ist dieses Kriterium nicht erfüllt, werden die Angaben in den Tabellen kursiv hinterlegt. Die Angabe von kursiven Werten ist nützlich für Fälle, in denen auch grössere Durchbiegungen akzeptiert werden können.
- Der Nachweis der Tragfähigkeit im Bauzustand erfolgt mit der Lastfallkombination 1.35 EG + 1.50 NL.

Die in den Belastungstabellen angegebenen Nutzlasten basieren auf definierten Annahmen zur Querschnittsbewehrung. Die zugehörigen Bewehrungsgrade basieren auf Vorgaben aus den entsprechenden Normen (z.B. EN 1994-1-1). Im Fall der **fett** gedruckten Tabellenwerte wurde die Querschnittsbewehrung zur Optimierung der Nutzlasten leicht erhöht. Sollten die in den Belastungstabellen angegebenen Nutzlasten zu klein (bzw. zu gross) sein, kann die Querschnittsbewehrung erhöht (bzw. reduziert) werden.

Les bases de calcul ci-dessous sont appliquées **pour le stade définitif**:

- Application de l'effet mixte mécanique de la collaboration tôle – béton dû aux nervures en queue d'aronde, au bosselage de la nervure supérieure des profils SHR, ainsi qu'à la mise en œuvre d'ancrages d'extrémité (BVA).
- Les calculs sont en général réalisés selon la méthode de la connexion partielle. Les options de calcul choisies sont soit la «chaîne de poutres à travée unique» qui peut être considérée comme un préalable à la théorie des rotules plastiques, soit la méthode de «redistribution des moments».
- Le critère de flèche au stade définitif est fixé à L/350 pour la combinaison de cas de charge 1.0 PP + 0.5 CU. Pour les cas dans lesquels ce critère de flèche n'est pas applicable, les données sont fournies en italique dans le tableau. L'indication de valeurs en italiques est utile dans les cas où de plus grandes flèches peuvent être acceptées.
- La vérification de la capacité portante au stade de la construction est effectuée avec la combinaison de cas de charge 1,35 PP + 1,50 CU.

Les charges utiles indiquées dans les tableaux de charge reposent sur des hypothèses définies pour l'armature en travée. Les taux de ferrailage afférents se basent sur les données issues des normes correspondantes (p.ex. EN 1994-1-1). Pour les valeurs en **gras** dans les tableaux, l'armature en travée a été légèrement accrue afin d'optimiser les charges utiles. Si les charges utiles données dans les tableaux de charge sont trop petites (ou grandes), il est possible d'augmenter (ou de réduire) l'armature en travée.

Per le condizioni definitive, vengono impiegate le seguenti basi di calcolo:

- Applicazione dell'effetto di connessione tra la lamiera e il calcestruzzo mediante la forma a coda di rondine delle scanalature, bugne sulla fascia superiore dei profilati SHR, nonché impiego di ancoraggi mediante schiacciamento della lamiera (BVA).
- I calcoli vengono fatti in generale secondo il metodo di «interazione parziale». Come opzioni di calcolo possono essere scelti «insieme di travi ad una campata», che può essere considerato uno stadio precedente al modello a cerniere plastiche, oppure il procedimento «ridistribuzione dei momenti».
- Il criterio di inflessione a condizioni finite viene definito con L/350 per la combinazione di carico 1.0 PP + 0.5 Q. Nei casi in cui il criterio di inflessione non è rilevante, i valori in tabella sono riportati in corsivo. L'indicazione dei valori in corsivo aiuta per casi in quali possono essere accettati anche delle inflessioni più grandi.
- La verifica della portata in fase di costruzione avviene con la combinazione di carico 1.35 PP + 1.50 Q.

I carichi utili indicati nelle tabelle di carico si basano su stime definite riguardo all'armatura. I relativi gradi di armatura si basano sulle indicazioni delle relative normative (ad es. EN 1994-1-1). Le cifre riportate in **grassetto** nelle tabelle indicano che l'armatura è stata lievemente maggiorata per ottimizzare i livelli di carico utile. Nel caso in cui i livelli di carico utile indicati nelle tabelle di carico siano troppo piccoli (o grandi), l'armatura può essere incrementata (o ridotta).

The following calculation principles were applied **for the construction stage**:

- Application of the mechanical composite action between sheet metal and concrete due to the dovetail rib shape, burls in the top flange of the SHR profiles and the use of sheet-forming anchors (BVA).
- The calculations are generally performed according to the partial composite method. The calculation option selected will either be the "single-span chain", which can be regarded as a preliminary stage of the plastic hinge theory, or the "redistribution of moments" method.
- The deflection criterion in the final state is defined as L/350 for the load case combination 1.0 dead weight + 0.5 service load. The data shown in italics in the table are for cases in which this deflection criterion is not relevant. The indication of values in italics is useful in case also bigger deflections are accepted.
- The load-bearing capacity in the construction state is verified with the load case combination 1.35 dead weight + 1.50 service load.

The service loads specified in the load tables as based on assumptions about the cross-sectional reinforcement. The associated degrees of reinforcement are based on specifications from the corresponding standards (e.g. EN 1994-1-1). In the case of the table values printed in **bold**, the cross-sectional reinforcement was slightly increased to optimise the service loads. If the service loads specified in the load tables are too small (or too big), the cross-sectional reinforcement can be increased (or reduced).

	Querschnittsbewehrung [in cm ² /m] bei normal gedruckten Tabellenwerten ³⁾ Armature en travée [en cm ² /m] pour valeur de table en caractères normaux ³⁾ Armatura [in cm ² /m] in caso di valori con caratteristiche normali ³⁾ Cross-sectional reinforcement [in cm ² /m] with table values printed normally ³⁾		Querschnittsbewehrung [in cm ² /m] bei fett gedruckten Tabellenwerten ³⁾ Armature en travée [en cm ² /m] pour valeur de table en caractères gras ³⁾ Armatura [in cm ² /m] in caso di valori in grassetto ³⁾ Cross-sectional reinforcement [in cm ² /m] with table values printed in bold ³⁾	
Deckenstärke [mm] Épaisseur de dalle [mm] Spessore solaio [mm] Floor thickness [mm]	Schwind- bzw. Mindestbewehrung ¹⁾ Armature de retrait et minimum ¹⁾ Armatura antiritiro ovvero minima ¹⁾ Shrinkage or minimum reinforcement ¹⁾	Stützbewehrung ²⁾ Armature sur appui ²⁾ Armatura aggiuntiva in corrispondenza degli appoggi ²⁾ Support reinforcement ²⁾		
	Bewehrungsgrad (0.15%) Taux de ferrailage (0.15%) Grado di armatura (0.15%) Degree of reinforcement (0.15%)	Ungesprieste Ausführung (0.2%) Exécution non-étayée (0.2%) Realizzazione senza puntelli (0.2%) Without temporary props (0.2%)	Gesprieste Ausführung (0.4%) Exécution étayée (0.4%) Realizzazione con puntelli (0.4%) With temporary props (0.4%)	
100	0.80	0.98	1.96	5.24
120	1.04	1.38	2.76	7.54
140	1.34	1.78	3.56	7.54
160	1.64	2.18	4.36	7.54
180	1.94	2.58	5.16	7.54
200	2.24	2.98	5.96	10.25
220	2.54	3.38	6.76	10.25
240	2.84	3.78	7.56	10.25
260	3.14	4.18	8.36	13.40

Tabelle 1 / Tableau 1 / Tabella 1 / Table 1
Erläuterungen zu ¹⁾, ²⁾, ³⁾ und ⁴⁾ auf Seite 6

Explications pour ¹⁾, ²⁾, ³⁾ et ⁴⁾ en page 6

Osservazioni per ¹⁾, ²⁾, ³⁾ e ⁴⁾ su pagina 6

Explanations for ¹⁾, ²⁾, ³⁾ and ⁴⁾ on page 6

- 1) Um eine ausreichende Querverteilung der einwirkenden Belastungen sicherzustellen, muss im Querschnitt der Verbunddecke in beiden Richtungen eine konstruktive Mindestbewehrung von mindestens 0,8 cm²/m angeordnet werden.
- 2) Schwindbewehrung darf auf die Stützbewehrung angerechnet werden.
- 3) Ein Nachweis der Rissbreitenbeschränkung des Betons ist in den Bemessungstabellen nicht enthalten. Dieser Nachweis muss, falls erforderlich, unter Ansatz der tatsächlich vorhandenen Bewehrung, separat geführt werden. Daraus kann sich gegebenenfalls ein höherer Bewehrungsgrad ergeben.
- 4) Bewehrung ist in Tragrichtung über 0,15 x Stützweite + notwendige Verankerungslänge einzulegen. In Querrichtung genügen 20% der angegebenen Werte.

Für komplizierte statische Systeme (stark ungleiche Stützweiten, grosse Einzel- oder Linienlasten, trapezförmige Lasten) oder sonstige Sonderfälle (schwimmende Lagerung, Anforderungen an den Feuerwiderstand, usw.) empfiehlt sich der Einsatz der kostenfrei erhältlichen Bemessungssoftware für HR51 und SHR51. Diese ist über die Internetseite www.montana-ag.ch beziehbar.

WICHTIGE HINWEISE FÜR BELASTUNGSTABELLEN

Die angegebenen zulässigen Nutzlasten [in kN/m²] sind auf charakteristischem Lastniveau. Sie basieren auf der Annahme einer Endverankerung mit Blechverformungsankern (BVA).

Angaben zur Anzahl der Montageunterstützungen pro Feld:

- A) 0 x Spriessen / 1 x Spriessen / 2 x Spriessen / 3 x Spriessen

Angaben zur Längsbewehrung:

- Normal gedruckte Werte: Schwind- und Stützbewehrung gemäss Tabelle 1 (Seite 5) notwendig
- **Fett gedruckte Werte:** zur Erreichung der angegebenen Nutzlast ist ein erhöhter Bewehrungsgrad nach Tabelle 1 (Seite 5) notwendig

Angaben zur Durchbiegungsbegrenzung:

- *Kursiv gedruckte Werte:* das Durchbiegungskriterium L/350 (falls relevant) ist unter der angegebenen Nutzlast überschritten.

- 1) Afin de garantir une répartition transversale suffisante des contraintes actives, il faut aménager dans la section de la dalle mixte une armature minimale structurelle d'au moins 0,8 cm²/m dans les deux sens.
- 2) L'armature de retrait peut être imputée sur l'armature sur appui.
- 3) Les tableaux de dimensionnement ne contiennent pas de vérification de la limitation de l'ouverture des fissures du béton. Si nécessaire, cette vérification doit être effectuée séparément en tenant compte de l'armature effectivement présente. Ceci peut le cas échéant déboucher sur un taux d'armature plus élevé.
- 4) Dans le sens porteur, l'armature est mise en place selon un coefficient de 0,15 x la portée + la longueur d'ancrage requise. Dans le sens transversal, 20% de la valeur indiquée sont suffisants.

Pour des systèmes statiques complexes (portées fortement irrégulières, charges isolées ou linéaires importantes, charges trapézoïdales) ou autres cas spéciaux (pose flottante, exigences de résistance au feu, etc.), il est recommandé d'utiliser le logiciel de dimensionnement gratuit pour HR51 et SHR51. Celui-ci est disponible sur le site web www.montana-ag.ch

INDICATIONS IMPORTANTES POUR LES TABLEAUX DE CHARGE

Les charges utiles admissibles indiquées [en kN/m²] sont à un niveau de charge caractéristique. Elles se basent sur l'hypothèse d'un ancrage d'extrémité (BVA).

Indications sur le nombre d'étais par travée pour la pose:

- A) 0 x étayage / 1 x étayage / 2 x étayage / 3 x étayage

Indications sur l'armature longitudinale:

- Valeurs à caractères normaux: armature de retrait et sur appui requise conformément au tableau 1 (page 5)
- **Valeurs à caractères gras:** un taux accru d'armature conformément au tableau 1 (page 5) est requis pour atteindre la charge utile indiquée

Indications sur la flèche limite:

- *Valeurs à caractères italiques:* le critère de flèche L/350 (si applicable) est dépassé sous la charge utile indiquée.

- 1) Per garantire una sufficiente distribuzione trasversale dei carichi applicati, deve essere sistemata nella sezione del solaio misto un'armatura di costruzione minima di almeno 0,8 cm²/m in entrambe le direzioni.
- 2) L'armatura antiritiro può essere compresa nel calcolo dell'armatura aggiuntiva in corrispondenza degli appoggi.
- 3) La verifica della limitazione delle fessurazioni del cls non è compresa nelle tabelle. Tale verifica, se richiesta, deve essere condotta a parte sulla base dell'armatura effettivamente presente. Da ciò potrebbe eventualmente risultare un maggior grado di armatura.
- 4) L'armatura deve essere inserita in direzione portante al di sopra di 0,15 x distanza tra gli appoggi + lunghezza necessaria di ancoraggio. In direzione trasversale è sufficiente il 20% dei valori indicati.

Per sistemi statici complessi (distanza tra gli appoggi fortemente irregolare, grandi carichi puntuali o lineari, carichi trapezoidali) o altri casi particolari (appoggio flottante, necessità di resistenza al fuoco ecc.) si consiglia l'impiego del software di calcolo gratuito per HR51 e SHR51. Lo si può richiedere sul sito www.montana-ag.ch

INDICAZIONI IMPORTANTI TABELLE DI CARICO

I carichi utili ammessi [in kN/m²] si riferiscono a livelli di carico tipici. Si basano sulla presenza di ancoraggi alle estremità mediante schiacciamento della lamiera (BVA).

Indicazioni sul numero di sostegni di montaggio per campata:

- A) 0 puntelli / 1 puntello / 2 puntelli / 3 puntelli

Indicazioni sull'armatura longitudinale:

- Valori in caratteri normali: armatura antiritiro e armatura aggiuntiva in corrispondenza dei nodi necessarie secondo tabella 1 (pagina 5)
- **Valori in grassetto:** per arrivare al livello di carico utile indicato è necessario un grado di armatura maggiorato secondo tabella 1 (pagina 5)

Indicazioni sul limite di freccia:

- *Valori in corsivo:* il criterio di inflessione L/350 (se rilevante) con il carico utile indicato è superato.

- 1) In order to ensure an adequate transversal distribution of the acting loads, a constructive minimum reinforcement of at least 0.8 cm²/m must be located in the cross-section of the composite floor deck.
- 2) Shrinkage reinforcement may be credited against the support reinforcement.
- 3) A verification of the crack width limitation of the concrete is not included in the dimensioning tables. If necessary this verification must be provided separately on the basis of the actually existing reinforcement. This may result in a higher degree of reinforcement.
- 4) Reinforcement in bearing direction over a length of 0.15 x span + necessary anchorage length. In transverse direction 20% of the given values are sufficient.

For complicated static systems (very unequal spans, large individual or linear loads, trapezoidal loads) or other special cases (floating bearing, requirements for fire resistance, etc.), it is recommended to use the dimensioning software for HR51 and SHR51, which is available free of charge. This can be requested on our website www.montana-ag.ch

IMPORTANT INFORMATION TO LOAD TABLES

The specified permissible working loads [in kN/m²] are at a characteristic load level. They are based on the assumption of an end anchorage with sheet-forming anchors (BVA).

Specification of the number of assembly supports per span:

- A) 0 building props / 1 building prop / 2 building props / 3 building props

Specifications for longitudinal reinforcement:

- Values printed normally: shrinkage and support reinforcement necessary according to table 1 (page 5)
- **Values printed in bold:** to achieve the specified working load, an increased degree of reinforcement is required in accordance with table 1 (page 5)

Specifications for deflection limitation:

- *Values printed in italics:* the deflection criterion L/350 (if relevant) is exceeded under the specified working load.

ANWENDUNGEN APPLICATIONS APPLICATIONS APPLICAZIONI

FALLBEISPIEL

EXEMPLE (CAS DE FIGURE)

ESEMPIO PRATICO

CASE STUDY

BESCHREIBUNG

Im Rahmen einer Umnutzung soll in einer bestehenden Industriehalle über eine Fläche von L 72 x B 20 m eine Zwischendecke mit SUPERHOLORIB® SHR 51 und Normalbeton C25/30 auf einer Stahlunterkonstruktion realisiert werden. Die Deckenstärke soll nach Angaben des Architekten mind. 12 cm betragen. Die in der Nutzungsvereinbarung spezifizierte Nutzlast beträgt 10 kN/m². Das einzuhaltende Durchbiegungskriterium im Endzustand wird mit L/350 definiert.

Die Stahlträger IPE 300 der Unterkonstruktion sind im Abstand von 3,60 m angeordnet (20 Felder á 3,60 m). Damit ergibt sich das folgend dargestellte statische System (vereinfacht):

DESCRIPTION

Dans le cadre du changement d'affectation d'une halle industrielle existante, un plancher d'une surface de L 72 x l 20 m doit être réalisé sur une structure en acier avec les profils SUPERHOLORIB® SHR 51 et du béton normal C25/30. Selon les indications de l'architecte, l'épaisseur de dalle doit être de min. 12 cm. La charge utile spécifiée dans la convention d'utilisation est de 10 kN/m². Le critère de flèche imposé au stade définitif est défini à L/350.

Les poutres en acier IPE 300 de la structure sont espacées de 3,60 m (20 travées á 3,60 m). Ceci donne le système statique représenté ci-dessous (simplifié):

DESCRIZIONE

Nell'ambito del cambio d'uso di un capannone industriale, deve essere realizzato con SUPERHOLORIB® SHR 51 e calcestruzzo normale C25/30 un solaio intermedio di superficie di 72 x 20 m su una sottostruttura in acciaio. Lo spessore del solaio deve essere, secondo le indicazioni dell'architetto, minimo di 12 cm. Il livello di carico utile specificato nell'accordo di utilizzo è di 10 kN/m². Il criterio di inflessione da rispettare in condizioni finite è definito come L/350.

Le travi d'acciaio IPE 300 della sottostruttura sono disposte a distanza di 3,60 m una dall'altra (20 campate da 3,60 m). Ne risulta il seguente sistema statico (semplificato) illustrato di seguito:

DESCRIPTION

Within the scope of a conversion of an existing industrial building, an intermediate floor with an area of 72 x 20 m (L x W) is to be constructed on a steel substructure with SUPERHOLORIB® SHR 51 and normal weight concrete C25/30. According to the architect's specifications, the floor thickness should be at least 12 cm. The service load specified in the usage agreement is 10 kN/m². The deflection criterion to be adhered to in the concrete state is defined as L/350.

The IPE 300 steel beams of the substructure are arranged at distances of 3.60 m (20 spans of 3.60 m each). This results in the static system illustrated below (simplified):



Die Profiltafeln sollen über maximal 2 Felder verlegt werden, damit die Länge der Profiltafeln aufgrund Einschränkungen bei der Zugänglichkeit beim Bau in den Beständen nicht zu groß wird.

VAR. 1: WAHL DES GEEIGNETEN SHR-PROFILS – «DÜNNSTER BLECHTYP»

Der Ansatz, dass das Blech mit der dünnsten Blechdicke die scheinbar günstigste Variante darstellt, führt zum Blechtyp SUPERHOLORIB® SHR 51 in Blechdicke t = 0,75 mm (vgl. Seite 12).

Les profils doivent être posés sur maximum deux travées afin que leur longueur ne soit pas trop grande, en vertu de l'accessibilité restreinte pour la construction dans l'existant.

VAR. 1: SÉLECTION DU PROFIL SHR ADÉQUAT – «LA TÔLE LA PLUS FINE»

L'hypothèse selon laquelle la tôle la plus fine représente la variante apparemment la plus avantageuse débouche sur le choix du type de tôle SUPERHOLORIB® SHR 51 dans une épaisseur t = 0,75 mm (selon page 12).

I pannelli profilati devono essere posati su massimo 2 campate, affinché la lunghezza dei pannelli profilati non sia troppo grande, a causa dei limiti di accessibilità, dovuti al fatto di operare su un edificio esistente.

VAR. 1: SCELTA DEL PROFILO SHR ADATTO – «LAMIERA PIÙ SOTTILE»

L'approccio che prevede che la lamiera più sottile sia la variante più conveniente, porta alla lamiera tipo SUPERHOLORIB® SHR 51 di spessore t = 0,75 mm (vedi pagina 12).

The profiled sheets should be laid over 2 spans at the most, so that the length of the profiled sheets is not too long on account of limitations in access when constructing in an existing building.

VAR. 1: SELECTION OF THE SUITABLE SHR PROFILE – "THINNEST TYPE OF SHEET METAL"

The approach where the thinnest sheet metal is apparently the cheapest variant leads to the sheet type SUPERHOLORIB® SHR 51 with a thickness t of 0.75 mm (see page 12).

SUPERHOLORIB® SHR 51/150 0.75 mm

	1.00	1.20	1.40	1.60	1.80	2.00	2.20	2.40	2.60	2.80	3.00	3.20	3.40	3.60	3.80	4.00	4.20	4.40	4.60	4.80	5.00	5.20	5.40	
100	60.0	50.0	40.0	30.0	30.0	25.0	25.0	20.0	20.0	15.0	15.0	12.5	10.0	12.5	7.5	7.5	5.0	5.0	5.0					
120	70.0	50.0	40.0	40.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	15.0	12.5	12.5	10.0	10.0	7.5	7.5	5.0	5.0	5.0			
140	70.0	60.0	50.0	40.0	40.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	7.5	5.0	5.0	5.0	5.0
160	80.0	70.0	60.0	50.0	40.0	40.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	7.5	7.5	7.5	5.0	5.0
180	80.0	70.0	60.0	50.0	50.0	40.0	40.0	30.0	30.0	30.0	25.0	25.0	25.0	20.0	15.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	7.5	7.5
200	80.0	80.0	70.0	60.0	50.0	40.0	40.0	40.0	30.0	30.0	30.0	25.0	25.0	25.0	20.0	15.0	15.0	15.0	15.0	15.0	15.0	12.5	12.5	10.0
220	80.0	80.0	70.0	60.0	50.0	50.0	40.0	40.0	40.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	15.0	15.0	15.0	15.0	15.0	15.0	12.5	12.5
240	80.0	80.0	70.0	60.0	60.0	50.0	40.0	40.0	40.0	30.0	30.0	30.0	25.0	25.0	25.0	20.0	20.0	15.0	15.0	15.0	15.0	15.0	15.0	12.5
260	80.0	80.0	80.0	70.0	60.0	50.0	50.0	40.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	20.0	20.0	20.0	15.0	15.0	15.0
A)	0					1										2								

Aus der Tabelle ist abzulesen, dass der Blechtyp SUPERHOLORIB® SHR 51 in Blechstärke t = 0,75 mm, bei einer Deckenstärke von 12 cm mit 12,5 kN/m² Nutzlast belastet werden kann. Unter den gegebenen Randbedingungen ist das definierte Durchbiegungskriterium mit L/350 eingehalten. Allerdings muss dieser

Partant du tableau, on constate que le type de tôle SUPERHOLORIB® SHR 51 avec une épaisseur t = 0,75 mm et une épaisseur de dalle de 12 cm peut recevoir une charge utile de 12,5 kN/m². Dans les conditions limites données, le critère de flèche défini avec L/350 est respecté. Toutefois, ce type de tôle doit être étayé une fois de manière

Dalla tabella si ricava che la lamiera tipo SUPERHOLORIB® SHR 51 di spessore t = 0,75 mm, in caso di spessore del solaio di 12 cm, può essere sollecitata con un carico utile di 12,5 kN/m². Con le condizioni date, il criterio di inflessione definito di L/350 viene rispettato. Tuttavia questo tipo di lamiera deve essere temporanea-

From the table it can be seen that the sheet type SUPERHOLORIB® SHR 51 with a thickness t = 0.75 mm can be loaded with 12.5 kN/m² with a floor thickness of 12 cm. Under the given boundary conditions, the defined deflection criterion of L/350 is met. However, this type of sheet must be temporarily propped in the con-

FALLBEISPIEL

EXEMPLE (CAS DE FIGURE)

ESEMPIO PRATICO

CASE STUDY

Blechtyp im Bauzustand einmal temporär unterspriesst werden, solange bis der Beton eine vorab definierte Festigkeit und Tragfähigkeit erreicht hat.

VAR. 2: WAHL DES GEEIGNETEN SHR-PROFILS – «UNTER BETRACHTUNG DER GESAMT-WIRTSCHAFTLICHKEIT»

Einen grossen Kostentreiber stellen meist die Personalkosten dar, welche beispielsweise auch für das Stellen der Montageunterstützungen (Spriese) anfallen. Die Kosten, welche hierfür eingespart werden können, übertreffen die Mehrkosten für einen Blechtyp mit grösserer Blechdicke um ein Vielfaches. Unter der Betrachtung der Gesamtwirtschaftlichkeit ist daher nach einem Blechtyp zu suchen, der sämtliche Lasten (Betongewicht, Verkehrslasten, etc.) im Bauzustand freitragend ohne Montageunterstützung aufnehmen kann. Dieser Ansatz führt zum Blechtyp SUPERHOLORIB® SHR 51 in Blechdicke t = 1.25 mm (vgl. Seite 15).

temporaire pendant la phase de construction, jusqu'à ce que le béton ait atteint une résistance et une capacité portante préalablement définies.

VAR. 2: SÉLECTION DU PROFIL SHR ADÉQUAT – «PRISE EN COMPTE DE LA RENTABILITÉ GLOBALE»

Les frais de main d'œuvre représentent souvent un important facteur de coût, par exemple pour la mise en place des étais pour la pose. Les frais qui peuvent être évités par ce biais dépassent largement le supplément engendré par un type de tôle plus épais. Prenant en considération la rentabilité globale, il convient donc de rechercher un type de tôle qui puisse supporter toutes les charges (poids du béton, charges mobiles, etc.) sans autre moyen d'appui pendant les phases de construction. Cette hypothèse mène au choix du profil SUPERHOLORIB® SHR 51 d'une épaisseur t = 1,25 mm (selon page 15).

mente puntellato, fino a che il calcestruzzo non abbia raggiunto una resistenza e portanza predefinite.

VAR. 2: SCELTA DEL PROFILO SHR ADATTO – «IN CONSIDERAZIONE DELLA CONVENIENZA COMPLESSIVA»

In genere i costi di personale rappresentano una notevole voce di spesa, che riguarda, ad esempio, anche la posa dei sostegni di montaggio (puntelli). I costi che possono essere risparmiati in tal senso superano di molto i maggiori costi dovuti ad una lamiera di tipo più spesso. In considerazione della convenienza complessiva deve essere ricercato dunque un tipo di lamiera che sia in grado di sostenere in fase di costruzione tutti i carichi (peso del calcestruzzo, carichi mobili ecc.) senza bisogno di sostegni di montaggio. Questo approccio porta a scegliere la lamiera tipo SUPERHOLORIB® SHR 51 di spessore t = 1.25 mm (vedi pagina 15).

struction state until the concrete has reached a predetermined strength and load-bearing capacity.

VAR. 2: SELECTION OF THE SUITABLE SHR PROFILE – "TAKING INTO CONSIDERATION THE OVERALL PROFITABILITY"

A big cost driver is often the personnel expenditure incurred, for example, for the placement of the assembly supports (temporary props). The costs that can be saved here exceed the additional costs for a sheet type with a greater thickness several times. Taking into consideration the overall profitability, a sheet type should therefore be sought that can bear all loads (weight of the concrete, traffic loads, etc.) in the construction state without temporary props. This approach leads to the sheet type SUPERHOLORIB® SHR 51 with a thickness t = 1.25 mm (see page 15).

SUPERHOLORIB® SHR 51/150 1.25 mm

	1.00	1.20	1.40	1.60	1.80	2.00	2.20	2.40	2.60	2.80	3.00	3.20	3.40	3.60	3.80	4.00	4.20	4.40	4.60	4.80	5.00	5.20	5.40	5.60	
100	70.0	60.0	50.0	40.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	15.0	15.0	10.0	12.5	10.0	10.0	7.5	7.5	7.5	5.0	5.0	5.0	5.0	
120	80.0	70.0	50.0	50.0	40.0	40.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	7.5	7.5	7.5	7.5	5.0
140	80.0	70.0	60.0	50.0	50.0	40.0	40.0	30.0	30.0	30.0	25.0	25.0	25.0	20.0	20.0	20.0	15.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	7.5
160	80.0	80.0	70.0	60.0	50.0	50.0	40.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	10.0
180	80.0	80.0	80.0	70.0	60.0	50.0	40.0	40.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	25.0	20.0	20.0	20.0	15.0	15.0	15.0	12.5	12.5	12.5
200	80.0	80.0	80.0	70.0	60.0	50.0	50.0	40.0	40.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0	15.0	15.0
220	80.0	80.0	80.0	80.0	70.0	60.0	50.0	50.0	40.0	40.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0	15.0
240	80.0	80.0	80.0	80.0	70.0	60.0	50.0	50.0	40.0	40.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	25.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0
260	80.0	80.0	80.0	80.0	70.0	60.0	60.0	50.0	50.0	40.0	40.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	25.0	20.0	20.0	20.0	20.0	20.0	20.0
A)	0										1														

Aus der Tabelle ist abzulesen, dass der Blechtyp SUPERHOLORIB® SHR 51 in Blechstärke t = 1.25 mm, bei einer Deckenstärke von 12 cm mit 20 kN/m² Nutzlast belastet werden kann. Die Anzahl der Spriese ist bei 3.60 m Spannweite mit «0» angegeben, d.h. es benötigt keinerlei Montageunterstützung im Bauzustand – die Blechtafeln sind freitragend. Auch das vorab definierte Durchbiegungskriterium L/350 ist in dieser Ausführung eingehalten. Mit dieser Bemessungsmethode kann auf simple Art und Weise eine grosse Kostenreduktion erzielt werden.

Partant du tableau, on constate que le type de tôle SUPERHOLORIB® SHR 51 avec une épaisseur t = 1,25 mm et une épaisseur de dalle de 12 cm peut recevoir une charge utile de 20 kN/m². Le nombre d'étais est «0» pour une portée de 3,60 m, c.-à-d. qu'il ne faut aucun support de montage pendant la construction – les profils sont autoportants. De même, le critère de flèche préalablement défini à L/350 est respecté dans cette variante. Cette méthode de dimensionnement permet de réaliser d'importantes économies en toute simplicité.

Dalla tabella si ricava che la lamiera tipo SUPERHOLORIB® SHR 51 di spessore t = 1.25 mm, in caso di spessore del solaio di 12 cm, può essere sollecitata con un carico utile di 20 kN/m². Il numero di puntelli con campata di 3.60 m è «0», questo significa che non necessita di alcun sostegno di montaggio. I pannelli di lamiera sono autoportanti. Anche il criterio di inflessione predefinito di L/350 viene rispettato da questa versione. Con questo metodo di calcolo, si può ottenere in modo semplice una notevole riduzione dei costi.

From the table it can be seen that the sheet type SUPERHOLORIB® SHR 51 with a thickness t of 1.25 mm can be loaded with 20 kN/m² with a floor thickness of 12 cm. The number of temporary props in the case of a span of 3.60 m is specified as "0", i.e. no assembly support is required at all in the construction state – the metal sheets are self-supporting. The predefined deflection criterion L/350 is met in this version. Large cost savings can be achieved in a simple manner using this dimensioning method.

HOLORIB® HR 51/150 0.75 mm

NORMALBETON BÉTON NORMAL CALCESTRUZZO NORMALE NORMAL CONCRETE C25/30

▲▲▲▲

Nutzlasten in [kN/m²]
Wichtige Hinweise siehe Seite 6

Charge utile en [kN/m²]
Indications importantes selon page 6

Carico utile in [kN/m²]
Indicazioni importanti vedi pagina 6

Service load in [kN/m²]
For important information see page 6

	0										1										2										3									
	1.00	1.20	1.40	1.60	1.80	2.00	2.20	2.40	2.60	2.80	3.00	3.20	3.40	3.60	3.80	4.00	4.20	4.40	4.60	4.80	5.00	5.20	5.40	5.60	5.80	6.00	6.20	6.40	6.60	6.80	7.00									
100	60.0	50.0	40.0	30.0	25.0	20.0	15.0	12.5	10.0	7.5	5.0	5.0	5.0																											
120	70.0	50.0	40.0	30.0	25.0	20.0	15.0	15.0	12.5	10.0	7.5	5.0	5.0																											
140	70.0	60.0	50.0	40.0	30.0	20.0	15.0	12.5	10.0	10.0	7.5	5.0	5.0																											
160	80.0	70.0	60.0	50.0	40.0	30.0	25.0	20.0	15.0	12.5	10.0	7.5	5.0	5.0																										
180	80.0	70.0	60.0	50.0	40.0	30.0	25.0	20.0	15.0	15.0	12.5	10.0	7.5	5.0	5.0																									
200	80.0	80.0	70.0	60.0	50.0	40.0	30.0	25.0	20.0	15.0	12.5	10.0	7.5	5.0	5.0																									
220	80.0	80.0	70.0	60.0	50.0	40.0	30.0	30.0	25.0	20.0	15.0	12.5	10.0	7.5	5.0	5.0																								
240	80.0	80.0	70.0	60.0	50.0	40.0	30.0	30.0	25.0	20.0	15.0	12.5	10.0	7.5	5.0	5.0																								
260	80.0	80.0	80.0	70.0	60.0	50.0	40.0	30.0	25.0	25.0	20.0	15.0	15.0	10.0	7.5	5.0	5.0																							
A)																																								

▲▲▲▲

	0										1										2										3									
	1.00	1.20	1.40	1.60	1.80	2.00	2.20	2.40	2.60	2.80	3.00	3.20	3.40	3.60	3.80	4.00	4.20	4.40	4.60	4.80	5.00	5.20	5.40	5.60	5.80	6.00	6.20	6.40	6.60	6.80	7.00									
100	60.0	50.0	40.0	30.0	25.0	20.0	15.0	15.0	12.5	10.0	7.5	5.0	5.0																											
120	70.0	50.0	40.0	30.0	25.0	20.0	15.0	15.0	12.5	10.0	7.5	5.0	5.0																											
140	70.0	60.0	50.0	40.0	30.0	20.0	15.0	12.5	10.0	10.0	7.5	5.0	5.0																											
160	80.0	70.0	60.0	50.0	40.0	30.0	25.0	20.0	15.0	12.5	10.0	7.5	5.0	5.0																										
180	80.0	70.0	60.0	50.0	40.0	30.0	25.0	20.0	15.0	15.0	12.5	10.0	7.5	5.0	5.0																									
200	80.0	80.0	70.0	60.0	50.0	40.0	30.0	25.0	20.0	15.0	12.5	10.0	7.5	5.0	5.0																									
220	80.0	80.0	80.0	70.0	60.0	50.0	40.0	30.0	30.0	25.0	20.0	15.0	12.5	10.0	7.5	5.0	5.0																							
240	80.0	80.0	80.0	70.0	60.0	50.0	40.0	40.0	30.0	25.0	20.0	15.0	15.0	10.0	7.5	5.0	5.0																							
260	80.0	80.0	80.0	80.0	70.0	60.0	50.0	40.0	30.0	30.0	25.0	20.0	15.0	15.0	10.0	7.5	5.0	5.0																						
A)																																								

▲▲▲▲

	0										1										2										3									
	1.00	1.20	1.40	1.60	1.80	2.00	2.20	2.40	2.60	2.80	3.00	3.20	3.40	3.60	3.80	4.00	4.20	4.40	4.60	4.80	5.00	5.20	5.40	5.60	5.80	6.00	6.20	6.40	6.60	6.80	7.00									
100	60.0	50.0	40.0	30.0	25.0	20.0	15.0	12.5	10.0	7.5	5.0	5.0																												
120	70.0	50.0	40.0	30.0	25.0	20.0	15.0	15.0	12.5	10.0	7.5	5.0	5.0																											
140	70.0	60.0	50.0	40.0	30.0	20.0	15.0	12.5	10.0	10.0	7.5	5.0	5.0																											
160	80.0	70.0	60.0	50.0	40.0	30.0	25.0	20.0	15.0	12.5	10.0	7.5	5.0	5.0																										
180	80.0	70.0	60.0	50.0	40.0	30.0	25.0	20.0	15.0	15.0	12.5	10.0	7.5	5.0	5.0																									
200	80.0	80.0	70.0	60.0	50.0	40.0	30.0	25.0	20.0	15.0	12.5	10.0	7.5	5.0	5.0																									
220	80.0	80.0	80.0	70.0	60.0	50.0	40.0	30.0	30.0	25.0	20.0	15.0	12.5	10.0	7.5	5.0	5.0																							
240	80.0	80.0	80.0	70.0	60.0	50.0	40.0	40.0	30.0	25.0	20.0	15.0	15.0	10.0	7.5	5.0	5.0																							
260	80.0	80.0	80.0	80.0	70.0	60.0	50.0	40.0	30.0	30.0	25.0	20.0	15.0	15.0	10.0	7.5	5.0	5.0																						
A)																																								

HOLORIB® HR 51/150 0.88 mm

NORMALBETON BÉTON NORMAL CALCESTRUZZO NORMALE NORMAL CONCRETE C25/30

Nutzlasten in [kN/m²] Carico utile in [kN/m²] Service load in [kN/m²]
Wichtige Hinweise siehe Seite 6 Indicazioni importanti ved. pagina 6 For important information see page 6

	0																1												2												3			
	1.00	1.20	1.40	1.60	1.80	2.00	2.20	2.40	2.60	2.80	3.00	3.20	3.40	3.60	3.80	4.00	4.20	4.40	4.60	4.80	5.00	5.20	5.40	5.60	5.80	6.00	6.20	6.40	6.60	6.80	7.00													
100	60.0	50.0	40.0	30.0	30.0	25.0	20.0	15.0	15.0	12.5	10.0	7.5	7.5	5.0	5.0	5.0																												
120	70.0	60.0	50.0	40.0	30.0	30.0	25.0	20.0	15.0	15.0	12.5	10.0	7.5	7.5	5.0	5.0	5.0	5.0																										
140	80.0	60.0	50.0	50.0	40.0	30.0	25.0	20.0	20.0	15.0	15.0	12.5	10.0	7.5	7.5	5.0	5.0	5.0	5.0																									
160	80.0	70.0	60.0	50.0	40.0	40.0	30.0	25.0	20.0	15.0	15.0	12.5	10.0	7.5	7.5	5.0	5.0	5.0	5.0																									
180	80.0	80.0	70.0	60.0	50.0	40.0	30.0	25.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0																									
200	80.0	80.0	70.0	60.0	50.0	40.0	40.0	30.0	25.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0																									
220	80.0	80.0	80.0	70.0	60.0	50.0	40.0	30.0	30.0	25.0	20.0	15.0	12.5	10.0	7.5	7.5	5.0	5.0	5.0																									
240	80.0	80.0	80.0	70.0	60.0	50.0	40.0	30.0	30.0	25.0	20.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0																									
260	80.0	80.0	80.0	70.0	60.0	50.0	40.0	30.0	40.0	30.0	25.0	20.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0																								

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	0																1												2												3			
	1.00	1.20	1.40	1.60	1.80	2.00	2.20	2.40	2.60	2.80	3.00	3.20	3.40	3.60	3.80	4.00	4.20	4.40	4.60	4.80	5.00	5.20	5.40	5.60	5.80	6.00	6.20	6.40	6.60	6.80	7.00													
100	60.0	50.0	40.0	30.0	30.0	25.0	20.0	15.0	15.0	12.5	10.0	7.5	7.5	5.0	5.0																													
120	70.0	60.0	50.0	40.0	30.0	30.0	25.0	20.0	15.0	15.0	12.5	10.0	7.5	7.5	5.0	5.0	5.0	5.0																										
140	80.0	60.0	50.0	50.0	40.0	30.0	25.0	20.0	20.0	15.0	15.0	12.5	10.0	7.5	7.5	5.0	5.0	5.0	5.0																									
160	80.0	70.0	60.0	50.0	40.0	40.0	30.0	25.0	20.0	15.0	15.0	12.5	10.0	7.5	7.5	5.0	5.0	5.0	5.0																									
180	80.0	80.0	70.0	60.0	50.0	40.0	30.0	30.0	25.0	20.0	15.0	12.5	10.0	7.5	7.5	5.0	5.0	5.0	5.0																									
200	80.0	80.0	70.0	60.0	50.0	40.0	40.0	30.0	30.0	25.0	20.0	15.0	12.5	10.0	7.5	7.5	5.0	5.0	5.0																									
220	80.0	80.0	80.0	70.0	60.0	50.0	40.0	40.0	40.0	30.0	25.0	20.0	15.0	12.5	10.0	7.5	7.5	5.0	5.0																									
240	80.0	80.0	80.0	70.0	60.0	50.0	40.0	40.0	40.0	30.0	25.0	20.0	15.0	12.5	10.0	7.5	7.5	5.0	5.0																									
260	80.0	80.0	80.0	70.0	60.0	50.0	40.0	50.0	40.0	40.0	30.0	25.0	20.0	15.0	12.5	10.0	7.5	7.5	5.0	5.0																								

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	0																1												2												3			
	1.00	1.20	1.40	1.60	1.80	2.00	2.20	2.40	2.60	2.80	3.00	3.20	3.40	3.60	3.80	4.00	4.20	4.40	4.60	4.80	5.00	5.20	5.40	5.60	5.80	6.00	6.20	6.40	6.60	6.80	7.00													
100	60.0	50.0	40.0	30.0	30.0	25.0	20.0	15.0	15.0	12.5	10.0	7.5	7.5	5.0	5.0																													
120	70.0	60.0	50.0	40.0	30.0	30.0	25.0	20.0	15.0	15.0	12.5	10.0	7.5	7.5	5.0	5.0	5.0	5.0																										
140	80.0	60.0	50.0	50.0	40.0	30.0	25.0	20.0	20.0	15.0	15.0	12.5	10.0	7.5	7.5	5.0	5.0	5.0	5.0																									
160	80.0	70.0	60.0	50.0	40.0	40.0	30.0	25.0	20.0	15.0	15.0	12.5	10.0	7.5	7.5	5.0	5.0	5.0	5.0																									
180	80.0	80.0	70.0	60.0	50.0	40.0	30.0	30.0	25.0	20.0	15.0	12.5	10.0	7.5	7.5	5.0	5.0	5.0	5.0																									
200	80.0	80.0	70.0	60.0	50.0	40.0	40.0	30.0	30.0	25.0	20.0	15.0	12.5	10.0	7.5	7.5	5.0	5.0	5.0																									
220	80.0	80.0	80.0	70.0	60.0	50.0	40.0	40.0	40.0	30.0	25.0	20.0	15.0	12.5	10.0	7.5	7.5	5.0	5.0																									
240	80.0	80.0	80.0	70.0	60.0	50.0	40.0	40.0	40.0	30.0	25.0	20.0	15.0	12.5	10.0	7.5	7.5	5.0	5.0																									
260	80.0	80.0	80.0	70.0	60.0	50.0	40.0	50.0	40.0	40.0	30.0	25.0	20.0	15.0	12.5	10.0	7.5	7.5	5.0	5.0																								

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HOLORIB® HR 51/150 1.00 mm

NORMALBETON BÉTON NORMAL CALCESTRUZZO NORMALE NORMAL CONCRETE C25/30

▲▲▲▲▲ Nutzlaster in [kN/m²] Carico utile in [kN/m²] Service load in [kN/m²]
 Wichtige Hinweise siehe Seite 6 Indications importantes selon page 6 Indicazioni importanti vedi pagina 6 For important information see page 6

	1.00	1.20	1.40	1.60	1.80	2.00	2.20	2.40	2.60	2.80	3.00	3.20	3.40	3.60	3.80	4.00	4.20	4.40	4.60	4.80	5.00	5.20	5.40	5.60	5.80	6.00	6.20	6.40	6.60	6.80	7.00			
100	60.0	50.0	40.0	40.0	30.0	30.0	25.0	20.0	15.0	15.0	12.5	10.0	7.5	7.5	7.5	5.0	5.0																	
120	70.0	60.0	50.0	40.0	40.0	30.0	25.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0																
140	80.0	70.0	60.0	50.0	40.0	40.0	30.0	25.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0															
160	80.0	80.0	60.0	50.0	50.0	40.0	30.0	30.0	25.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0															
180	80.0	80.0	70.0	60.0	50.0	50.0	40.0	30.0	25.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0															
200	80.0	80.0	70.0	60.0	60.0	50.0	40.0	30.0	30.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0														
220	80.0	80.0	80.0	70.0	60.0	50.0	40.0	30.0	30.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0														
240	80.0	80.0	80.0	70.0	60.0	60.0	50.0	40.0	30.0	20.0	20.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0															
260	80.0	80.0	80.0	70.0	60.0	60.0	50.0	40.0	40.0	30.0	30.0	25.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	7.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0			
A)	0																	2																



	1.00	1.20	1.40	1.60	1.80	2.00	2.20	2.40	2.60	2.80	3.00	3.20	3.40	3.60	3.80	4.00	4.20	4.40	4.60	4.80	5.00	5.20	5.40	5.60	5.80	6.00	6.20	6.40	6.60	6.80	7.00			
100	60.0	50.0	40.0	40.0	30.0	30.0	25.0	20.0	15.0	15.0	12.5	10.0	7.5	7.5	7.5	5.0	5.0																	
120	70.0	60.0	50.0	40.0	40.0	30.0	25.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0																
140	80.0	70.0	60.0	50.0	40.0	40.0	30.0	25.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0															
160	80.0	80.0	60.0	50.0	50.0	40.0	30.0	25.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0																
180	80.0	80.0	70.0	60.0	50.0	50.0	40.0	30.0	25.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0															
200	80.0	80.0	70.0	60.0	60.0	50.0	40.0	30.0	30.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0														
220	80.0	80.0	80.0	70.0	60.0	50.0	40.0	30.0	30.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0														
240	80.0	80.0	80.0	70.0	60.0	60.0	50.0	40.0	30.0	20.0	20.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0															
260	80.0	80.0	80.0	70.0	60.0	60.0	50.0	40.0	40.0	30.0	30.0	25.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	7.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0			
A)	0																	2																



	1.00	1.20	1.40	1.60	1.80	2.00	2.20	2.40	2.60	2.80	3.00	3.20	3.40	3.60	3.80	4.00	4.20	4.40	4.60	4.80	5.00	5.20	5.40	5.60	5.80	6.00	6.20	6.40	6.60	6.80	7.00			
100	60.0	50.0	40.0	40.0	30.0	30.0	25.0	20.0	15.0	15.0	12.5	10.0	7.5	7.5	7.5	5.0	5.0																	
120	70.0	60.0	50.0	40.0	40.0	30.0	25.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0																
140	80.0	70.0	60.0	50.0	40.0	40.0	30.0	25.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0															
160	80.0	80.0	60.0	50.0	50.0	40.0	30.0	25.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0																
180	80.0	80.0	70.0	60.0	50.0	50.0	40.0	30.0	25.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0															
200	80.0	80.0	70.0	60.0	60.0	50.0	40.0	30.0	30.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0														
220	80.0	80.0	80.0	70.0	60.0	50.0	40.0	30.0	30.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0														
240	80.0	80.0	80.0	70.0	60.0	60.0	50.0	40.0	30.0	20.0	20.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0															
260	80.0	80.0	80.0	70.0	60.0	60.0	50.0	40.0	40.0	30.0	30.0	25.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	7.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0			
A)	0																	2																

SUPERHOLORIB® SHR 51/150 0.75 mm

NORMALBETON BÉTON NORMAL CALCESTRUZZO NORMALE NORMAL CONCRETE C25/30

Service load in [kN/m²]
For important information see page 6

Carico utile in [kN/m²]
Indicazioni importanti vedi pagina 6

Charge utile en [kN/m²]
Indications importantes selon page 6

Nutzlasten in [kN/m²]
Wichtige Hinweise siehe Seite 6

	1										2										3												
	1.00	1.20	1.40	1.60	1.80	2.00	2.20	2.40	2.60	2.80	3.00	3.20	3.40	3.60	3.80	4.00	4.20	4.40	4.60	4.80	5.00	5.20	5.40	5.60	5.80	6.00	6.20	6.40	6.60	6.80	7.00		
100	60.0	50.0	40.0	30.0	30.0	25.0	25.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0	5.0	5.0	5.0												
120	70.0	50.0	40.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0	5.0	5.0												
140	70.0	60.0	50.0	40.0	40.0	30.0	30.0	25.0	25.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0	5.0												
160	80.0	70.0	60.0	50.0	40.0	30.0	30.0	25.0	25.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0	5.0												
180	80.0	70.0	60.0	50.0	40.0	30.0	30.0	25.0	25.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0	5.0												
200	80.0	80.0	70.0	60.0	50.0	40.0	30.0	30.0	25.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0	5.0												
220	80.0	80.0	70.0	60.0	50.0	40.0	30.0	30.0	25.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0	5.0												
240	80.0	80.0	70.0	60.0	60.0	40.0	40.0	30.0	25.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0	5.0												
260	80.0	80.0	80.0	70.0	60.0	50.0	40.0	30.0	30.0	30.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	7.5	7.5	7.5	5.0	5.0	5.0	5.0	5.0	
A)																																	



	1										2										3												
	1.00	1.20	1.40	1.60	1.80	2.00	2.20	2.40	2.60	2.80	3.00	3.20	3.40	3.60	3.80	4.00	4.20	4.40	4.60	4.80	5.00	5.20	5.40	5.60	5.80	6.00	6.20	6.40	6.60	6.80	7.00		
100	60.0	50.0	40.0	30.0	30.0	25.0	25.0	20.0	20.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0	5.0	5.0	5.0	5.0												
120	70.0	50.0	40.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0	5.0	5.0												
140	70.0	60.0	50.0	40.0	40.0	30.0	30.0	25.0	25.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0	5.0												
160	80.0	70.0	60.0	50.0	40.0	30.0	30.0	25.0	25.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0	5.0												
180	80.0	70.0	60.0	50.0	40.0	30.0	30.0	25.0	25.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0	5.0												
200	80.0	80.0	70.0	60.0	50.0	40.0	30.0	30.0	25.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0	5.0												
220	80.0	80.0	70.0	60.0	50.0	40.0	30.0	30.0	25.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0	5.0												
240	80.0	80.0	70.0	60.0	60.0	40.0	40.0	30.0	25.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0	5.0												
260	80.0	80.0	80.0	70.0	60.0	50.0	40.0	30.0	30.0	30.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	7.5	7.5	7.5	5.0	5.0	5.0	5.0	5.0	
A)																																	



	1										2										3												
	1.00	1.20	1.40	1.60	1.80	2.00	2.20	2.40	2.60	2.80	3.00	3.20	3.40	3.60	3.80	4.00	4.20	4.40	4.60	4.80	5.00	5.20	5.40	5.60	5.80	6.00	6.20	6.40	6.60	6.80	7.00		
100	60.0	50.0	40.0	30.0	30.0	25.0	25.0	20.0	20.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0	5.0	5.0	5.0	5.0												
120	70.0	50.0	40.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0	5.0	5.0												
140	70.0	60.0	50.0	40.0	40.0	30.0	30.0	25.0	25.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0	5.0												
160	80.0	70.0	60.0	50.0	40.0	30.0	30.0	25.0	25.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0	5.0												
180	80.0	70.0	60.0	50.0	40.0	30.0	30.0	25.0	25.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0	5.0												
200	80.0	80.0	70.0	60.0	50.0	40.0	30.0	30.0	25.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0	5.0												
220	80.0	80.0	70.0	60.0	50.0	40.0	30.0	30.0	25.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0	5.0												
240	80.0	80.0	70.0	60.0	60.0	40.0	40.0	30.0	25.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0	5.0												
260	80.0	80.0	80.0	70.0	60.0	50.0	40.0	30.0	30.0	30.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	7.5	7.5	7.5	5.0	5.0	5.0	5.0	5.0	
A)																																	

SUPERHOLORIB® SHR 51/150 0.88 mm

NORMALBETON BÉTON NORMAL CALCESTRUZZO NORMALE NORMAL CONCRETE C25/30

Nutzlasten in [kN/m²]
Wichtige Hinweise siehe Seite 6

Charge utile en [kN/m²]
Indications importantes selon page 6

Carico utile in [kN/m²]
Indicazioni importanti vedi pagina 6

Service load in [kN/m²]
For important information see page 6

▲ ▲ ▲	0																1																2																3		
	1.00	1.20	1.40	1.60	1.80	2.00	2.20	2.40	2.60	2.80	3.00	3.20	3.40	3.60	3.80	4.00	4.20	4.40	4.60	4.80	5.00	5.20	5.40	5.60	5.80	6.00	6.20	6.40	6.60	6.80	7.00																				
100	60.0	50.0	40.0	30.0	30.0	25.0	25.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	7.5	7.5	5.0	5.0	5.0																															
120	70.0	60.0	50.0	40.0	40.0	30.0	30.0	25.0	25.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	7.5	7.5	5.0	5.0	5.0																													
140	80.0	60.0	50.0	40.0	40.0	30.0	30.0	25.0	25.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	7.5	7.5	5.0	5.0	5.0	5.0																												
160	80.0	70.0	60.0	50.0	40.0	40.0	40.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	7.5	7.5	7.5	5.0																										
180	80.0	80.0	70.0	60.0	50.0	40.0	40.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	10.0	7.5	7.5	7.5	5.0																									
200	80.0	80.0	70.0	60.0	50.0	50.0	40.0	40.0	30.0	30.0	30.0	25.0	25.0	25.0	20.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	7.5	7.5	5.0	5.0																								
220	80.0	80.0	80.0	70.0	60.0	50.0	50.0	40.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	7.5	7.5	5.0	5.0	5.0																						
240	80.0	80.0	80.0	70.0	60.0	50.0	50.0	40.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	7.5	7.5	5.0	5.0	5.0	5.0																					
260	80.0	80.0	80.0	70.0	60.0	50.0	50.0	40.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	7.5	7.5	5.0	5.0	5.0	5.0																					
A) ▲ ▲ ▲																																																			



▲ ▲ ▲	0																1																2																3		
	1.00	1.20	1.40	1.60	1.80	2.00	2.20	2.40	2.60	2.80	3.00	3.20	3.40	3.60	3.80	4.00	4.20	4.40	4.60	4.80	5.00	5.20	5.40	5.60	5.80	6.00	6.20	6.40	6.60	6.80	7.00																				
100	60.0	50.0	40.0	30.0	30.0	25.0	25.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	7.5	7.5	5.0	5.0	5.0																															
120	70.0	60.0	50.0	40.0	40.0	30.0	30.0	25.0	25.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	7.5	7.5	5.0	5.0	5.0																													
140	80.0	60.0	50.0	40.0	40.0	30.0	30.0	25.0	25.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	7.5	7.5	5.0	5.0	5.0																													
160	80.0	70.0	60.0	50.0	40.0	40.0	40.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	7.5	7.5	7.5	5.0																										
180	80.0	80.0	70.0	60.0	50.0	40.0	40.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	10.0	7.5	7.5	5.0																										
200	80.0	80.0	70.0	60.0	50.0	50.0	40.0	40.0	30.0	30.0	30.0	25.0	25.0	25.0	20.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	7.5	7.5	5.0	5.0																								
220	80.0	80.0	80.0	70.0	60.0	50.0	50.0	40.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	7.5	7.5	5.0	5.0	5.0																						
240	80.0	80.0	80.0	70.0	60.0	50.0	50.0	40.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	7.5	7.5	5.0	5.0	5.0	5.0																					
260	80.0	80.0	80.0	70.0	60.0	50.0	50.0	40.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	7.5	7.5	5.0	5.0	5.0	5.0	5.0																				
A) ▲ ▲ ▲																																																			



▲ ▲ ▲ ▲	0																1																2																3		
	1.00	1.20	1.40	1.60	1.80	2.00	2.20	2.40	2.60	2.80	3.00	3.20	3.40	3.60	3.80	4.00	4.20	4.40	4.60	4.80	5.00	5.20	5.40	5.60	5.80	6.00	6.20	6.40	6.60	6.80	7.00																				
100	60.0	50.0	40.0	30.0	30.0	25.0	25.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	7.5	7.5	5.0	5.0	5.0																															
120	70.0	60.0	50.0	40.0	40.0	30.0	30.0	25.0	25.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	7.5	7.5	5.0	5.0	5.0																													
140	80.0	60.0	50.0	40.0	40.0	30.0	30.0	25.0	25.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	7.5	7.5	5.0	5.0	5.0	5.0																												
160	80.0	70.0	60.0	50.0	40.0	40.0	40.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	7.5	7.5	7.5	5.0																										
180	80.0	80.0	70.0	60.0	50.0	40.0	40.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	10.0	7.5	7.5	5.0																										
200	80.0	80.0	70.0	60.0	50.0	50.0	40.0	40.0	30.0	30.0	30.0	25.0	25.0	25.0	20.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	7.5	7.5	5.0	5.0																								
220	80.0	80.0	80.0	70.0	60.0	50.0	50.0	40.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	7.5	7.5	5.0	5.0	5.0																						
240	80.0	80.0	80.0	70.0	60.0	50.0	50.0	40.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	7.5	7.5	5.0	5.0	5.0	5.0																					
260	80.0	80.0	80.0	70.0	60.0	50.0	50.0	40.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	7.5	7.5	5.0	5.0	5.0	5.0	5.0																				
A) ▲ ▲ ▲																																																			

SUPERHOLORIB® SHR 51/150 1.00 mm

NORMALBETON BÉTON NORMAL CALCESTRUZZO NORMALE NORMAL CONCRETE C25/30

Service load in [kN/m²]
For important information see page 6

Carico utile in [kN/m²]
Indicazioni importanti vedi pagina 6

Charge utile en [kN/m²]
Indications importantes selon page 6

Nutzlasten in [kN/m²]
Wichtige Hinweise siehe Seite 6

	1																2																
	1.00	1.20	1.40	1.60	1.80	2.00	2.20	2.40	2.60	2.80	3.00	3.20	3.40	3.60	3.80	4.00	4.20	4.40	4.60	4.80	5.00	5.20	5.40	5.60	5.80	6.00	6.20	6.40	6.60	6.80	7.00		
100	60.0	50.0	40.0	40.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0	5.0	5.0	5.0										
120	70.0	60.0	50.0	40.0	40.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	15.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	7.5	5.0	5.0										
140	80.0	70.0	60.0	50.0	40.0	40.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	15.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0									
160	80.0	80.0	60.0	50.0	40.0	40.0	40.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0									
180	80.0	80.0	70.0	60.0	50.0	50.0	40.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	10.0	10.0									
200	80.0	80.0	80.0	60.0	60.0	50.0	40.0	40.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	10.0	10.0								
220	80.0	80.0	80.0	70.0	60.0	50.0	50.0	40.0	40.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	10.0								
240	80.0	80.0	80.0	70.0	60.0	60.0	50.0	40.0	40.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	10.0								
260	80.0	80.0	80.0	70.0	60.0	60.0	50.0	50.0	40.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	10.0								
A)																																	



	1																2																
	1.00	1.20	1.40	1.60	1.80	2.00	2.20	2.40	2.60	2.80	3.00	3.20	3.40	3.60	3.80	4.00	4.20	4.40	4.60	4.80	5.00	5.20	5.40	5.60	5.80	6.00	6.20	6.40	6.60	6.80	7.00		
100	60.0	50.0	40.0	40.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0	5.0	5.0											
120	70.0	60.0	50.0	40.0	40.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	15.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	7.5	5.0	5.0										
140	80.0	70.0	60.0	50.0	40.0	40.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	15.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0									
160	80.0	80.0	60.0	50.0	40.0	40.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	15.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0									
180	80.0	80.0	70.0	60.0	50.0	50.0	40.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	10.0	10.0									
200	80.0	80.0	80.0	60.0	60.0	50.0	40.0	40.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	10.0	10.0								
220	80.0	80.0	80.0	70.0	60.0	50.0	50.0	40.0	40.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	10.0								
240	80.0	80.0	80.0	70.0	60.0	60.0	50.0	40.0	40.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	10.0								
260	80.0	80.0	80.0	70.0	60.0	60.0	50.0	50.0	40.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	10.0								
A)																																	



	1																2																
	1.00	1.20	1.40	1.60	1.80	2.00	2.20	2.40	2.60	2.80	3.00	3.20	3.40	3.60	3.80	4.00	4.20	4.40	4.60	4.80	5.00	5.20	5.40	5.60	5.80	6.00	6.20	6.40	6.60	6.80	7.00		
100	60.0	50.0	40.0	40.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0	5.0	5.0											
120	70.0	60.0	50.0	40.0	40.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	15.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	7.5	5.0	5.0										
140	80.0	70.0	60.0	50.0	40.0	40.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	15.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0									
160	80.0	80.0	60.0	50.0	40.0	40.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	15.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	5.0	5.0									
180	80.0	80.0	70.0	60.0	50.0	50.0	40.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	10.0	10.0									
200	80.0	80.0	80.0	60.0	60.0	50.0	40.0	40.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	10.0	10.0								
220	80.0	80.0	80.0	70.0	60.0	50.0	50.0	40.0	40.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	10.0								
240	80.0	80.0	80.0	70.0	60.0	60.0	50.0	40.0	40.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	10.0								
260	80.0	80.0	80.0	70.0	60.0	60.0	50.0	50.0	40.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	10.0								
A)																																	

SUPERHOLORIB® SHR 51/150 1.25 mm

NORMALBETON BÉTON NORMAL CALCESTRUZZO NORMALE NORMAL CONCRETE C25/30

Service load in [kN/m²]
For important information see page 6

Carico utile in [kN/m²]
Indicazioni importanti vedi pagina 6

Charge utile en [kN/m²]
Indications importantes selon page 6

Nutzlasten in [kN/m²]
Wichtige Hinweise siehe Seite 6

▲▲	0																	1							2								
	1.00	1.20	1.40	1.60	1.80	2.00	2.20	2.40	2.60	2.80	3.00	3.20	3.40	3.60	3.80	4.00	4.20	4.40	4.60	4.80	5.00	5.20	5.40	5.60	5.80	6.00	6.20	6.40	6.60	6.80	7.00		
100	70.0	60.0	50.0	40.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	15.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	7.5	5.0	5.0	5.0										
120	80.0	70.0	50.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	7.5	7.5	7.5	5.0	5.0	5.0	5.0	5.0					
140	80.0	70.0	60.0	50.0	40.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	7.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
160	80.0	80.0	70.0	60.0	50.0	50.0	40.0	40.0	40.0	40.0	30.0	30.0	30.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	7.5	5.0	5.0	5.0	5.0	5.0	5.0	
180	80.0	80.0	80.0	70.0	60.0	60.0	50.0	40.0	40.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	7.5	7.5	7.5	5.0	5.0	5.0	
200	80.0	80.0	80.0	80.0	70.0	60.0	50.0	40.0	40.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	7.5	7.5	7.5	5.0	5.0	5.0	
220	80.0	80.0	80.0	80.0	80.0	70.0	60.0	50.0	40.0	40.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	7.5	7.5	7.5	5.0	5.0	5.0
240	80.0	80.0	80.0	80.0	80.0	70.0	60.0	50.0	40.0	40.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	7.5	7.5	7.5	5.0	5.0	5.0
260	80.0	80.0	80.0	80.0	80.0	70.0	60.0	50.0	40.0	40.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	7.5	7.5	7.5	5.0	5.0	5.0
A)																		1							2								



▲▲	0																	1							2								
	1.00	1.20	1.40	1.60	1.80	2.00	2.20	2.40	2.60	2.80	3.00	3.20	3.40	3.60	3.80	4.00	4.20	4.40	4.60	4.80	5.00	5.20	5.40	5.60	5.80	6.00	6.20	6.40	6.60	6.80	7.00		
100	70.0	60.0	50.0	40.0	30.0	30.0	25.0	25.0	20.0	20.0	15.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	7.5	5.0	5.0	5.0											
120	80.0	70.0	50.0	40.0	30.0	30.0	30.0	30.0	25.0	20.0	20.0	20.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	7.5	7.5	7.5	5.0	5.0	5.0	5.0	5.0					
140	80.0	70.0	60.0	50.0	40.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	7.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
160	80.0	80.0	70.0	60.0	50.0	50.0	40.0	40.0	40.0	40.0	30.0	30.0	30.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	7.5	5.0	5.0	5.0	5.0	5.0	5.0	
180	80.0	80.0	80.0	70.0	60.0	60.0	50.0	40.0	40.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	7.5	7.5	7.5	5.0	5.0	5.0	
200	80.0	80.0	80.0	80.0	70.0	60.0	50.0	40.0	40.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	7.5	7.5	7.5	5.0	5.0	5.0	
220	80.0	80.0	80.0	80.0	80.0	70.0	60.0	50.0	40.0	40.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	7.5	7.5	7.5	5.0	5.0	5.0
240	80.0	80.0	80.0	80.0	80.0	70.0	60.0	50.0	40.0	40.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	7.5	7.5	7.5	5.0	5.0	5.0
260	80.0	80.0	80.0	80.0	80.0	70.0	60.0	50.0	40.0	40.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	7.5	7.5	7.5	5.0	5.0	5.0
A)																		1							2								



▲▲	0																	1							2								
	1.00	1.20	1.40	1.60	1.80	2.00	2.20	2.40	2.60	2.80	3.00	3.20	3.40	3.60	3.80	4.00	4.20	4.40	4.60	4.80	5.00	5.20	5.40	5.60	5.80	6.00	6.20	6.40	6.60	6.80	7.00		
100	70.0	60.0	50.0	40.0	30.0	30.0	25.0	25.0	20.0	20.0	15.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	7.5	5.0	5.0	5.0											
120	80.0	70.0	50.0	40.0	30.0	30.0	30.0	30.0	25.0	20.0	20.0	20.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	7.5	7.5	7.5	5.0	5.0	5.0	5.0	5.0					
140	80.0	70.0	60.0	50.0	40.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	7.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
160	80.0	80.0	70.0	60.0	50.0	50.0	40.0	40.0	40.0	40.0	30.0	30.0	30.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0	12.5	10.0	10.0	7.5	7.5	7.5	5.0	5.0	5.0	5.0	5.0	5.0	
180	80.0	80.0	80.0	70.0	60.0	60.0	50.0	40.0	40.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	7.5	7.5	7.5	5.0	5.0	5.0	
200	80.0	80.0	80.0	80.0	70.0	60.0	50.0	40.0	40.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	7.5	7.5	7.5	5.0	5.0	5.0	
220	80.0	80.0	80.0	80.0	80.0	70.0	60.0	50.0	40.0	40.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	7.5	7.5	7.5	5.0	5.0	5.0
240	80.0	80.0	80.0	80.0	80.0	70.0	60.0	50.0	40.0	40.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	7.5	7.5	7.5	5.0	5.0	5.0
260	80.0	80.0	80.0	80.0	80.0	70.0	60.0	50.0	40.0	40.0	40.0	30.0	30.0	30.0	30.0	25.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	7.5	7.5	7.5	5.0	5.0	5.0
A)																		1							2								

SUPERHOLORIB® SHR 51/150 0.75 mm

LEICHTBETON BÉTON LÉGER CALCESTRUZZO LEGGERO LIGHT CONCRETE LC25/28

Nutzlasten in [kN/m²]
Wichtige Hinweise siehe Seite 6

Carico utile in [kN/m²]
Indicazioni importanti vedi pagina 6

Charge utile en [kN/m²]
Indications importantes selon page 6

Service load in [kN/m²]
For important information see page 6

	0										1										2										3									
	1.00	1.20	1.40	1.60	1.80	2.00	2.20	2.40	2.60	2.80	3.00	3.20	3.40	3.60	3.80	4.00	4.20	4.40	4.60	4.80	5.00	5.20	5.40	5.60	5.80	6.00	6.20	6.40	6.60	6.80	7.00									
100	30.0	30.0	25.0	20.0	20.0	15.0	15.0	15.0	12.5	12.5	10.0	10.0	10.0	7.5	7.5	7.5	5.0	5.0	5.0	5.0	5.0																			
120	40.0	30.0	30.0	25.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	10.0	7.5	7.5	7.5	5.0	5.0	5.0	5.0	5.0	5.0																		
140	50.0	40.0	30.0	30.0	25.0	20.0	20.0	15.0	15.0	15.0	12.5	12.5	10.0	10.0	10.0	10.0	7.5	7.5	7.5	7.5	7.5	5.0	5.0																	
160	50.0	40.0	30.0	30.0	25.0	20.0	20.0	15.0	15.0	15.0	12.5	12.5	10.0	10.0	10.0	10.0	7.5	7.5	7.5	7.5	7.5	5.0	5.0	5.0																
180	60.0	50.0	40.0	30.0	30.0	25.0	20.0	20.0	15.0	15.0	15.0	12.5	12.5	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	7.5	7.5	7.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0									
200	60.0	50.0	40.0	30.0	30.0	25.0	20.0	20.0	15.0	15.0	15.0	12.5	12.5	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	7.5	7.5	7.5	7.5	5.0	5.0	5.0	5.0	5.0	5.0									
220	70.0	50.0	40.0	30.0	30.0	25.0	20.0	20.0	15.0	15.0	15.0	12.5	12.5	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	7.5	7.5	7.5	7.5	7.5	5.0	5.0	5.0	5.0	5.0									
240	70.0	50.0	40.0	30.0	30.0	25.0	20.0	20.0	15.0	15.0	15.0	12.5	12.5	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	7.5	7.5	7.5	7.5	7.5	7.5	5.0	5.0	5.0	5.0									
260	70.0	60.0	50.0	40.0	40.0	30.0	30.0	25.0	20.0	20.0	20.0	15.0	15.0	15.0	15.0	15.0	12.5	12.5	12.5	12.5	10.0	10.0	10.0	10.0	10.0	7.5	7.5	7.5	7.5	7.5	5.0									
A)																																								



	0										1										2										3									
	1.00	1.20	1.40	1.60	1.80	2.00	2.20	2.40	2.60	2.80	3.00	3.20	3.40	3.60	3.80	4.00	4.20	4.40	4.60	4.80	5.00	5.20	5.40	5.60	5.80	6.00	6.20	6.40	6.60	6.80	7.00									
100	30.0	30.0	25.0	20.0	20.0	15.0	15.0	15.0	12.5	12.5	10.0	10.0	10.0	7.5	7.5	7.5	5.0	5.0	5.0	5.0	5.0																			
120	40.0	30.0	30.0	25.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	10.0	7.5	7.5	7.5	5.0	5.0	5.0	5.0	5.0	5.0																		
140	50.0	40.0	30.0	30.0	25.0	20.0	20.0	15.0	15.0	15.0	12.5	12.5	10.0	10.0	10.0	10.0	7.5	7.5	7.5	7.5	7.5	5.0	5.0																	
160	50.0	40.0	30.0	30.0	25.0	20.0	20.0	15.0	15.0	15.0	12.5	12.5	10.0	10.0	10.0	10.0	7.5	7.5	7.5	7.5	7.5	5.0	5.0	5.0																
180	60.0	50.0	40.0	30.0	30.0	25.0	20.0	20.0	15.0	15.0	15.0	12.5	12.5	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	7.5	7.5	7.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0									
200	60.0	50.0	40.0	30.0	30.0	25.0	20.0	20.0	15.0	15.0	15.0	12.5	12.5	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	7.5	7.5	7.5	7.5	5.0	5.0	5.0	5.0	5.0	5.0									
220	70.0	50.0	40.0	30.0	30.0	25.0	20.0	20.0	15.0	15.0	15.0	12.5	12.5	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	7.5	7.5	7.5	7.5	7.5	5.0	5.0	5.0	5.0	5.0									
240	70.0	50.0	40.0	30.0	30.0	25.0	20.0	20.0	15.0	15.0	15.0	12.5	12.5	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	7.5	7.5	7.5	7.5	7.5	7.5	5.0	5.0	5.0	5.0									
260	70.0	60.0	50.0	40.0	40.0	30.0	30.0	25.0	20.0	20.0	20.0	15.0	15.0	15.0	15.0	15.0	12.5	12.5	12.5	12.5	10.0	10.0	10.0	10.0	10.0	7.5	7.5	7.5	7.5	7.5	5.0									
A)																																								



	0										1										2										3									
	1.00	1.20	1.40	1.60	1.80	2.00	2.20	2.40	2.60	2.80	3.00	3.20	3.40	3.60	3.80	4.00	4.20	4.40	4.60	4.80	5.00	5.20	5.40	5.60	5.80	6.00	6.20	6.40	6.60	6.80	7.00									
100	30.0	30.0	25.0	20.0	20.0	15.0	15.0	15.0	12.5	12.5	10.0	10.0	10.0	7.5	7.5	7.5	5.0	5.0	5.0	5.0	5.0																			
120	40.0	30.0	30.0	25.0	20.0	20.0	15.0	15.0	12.5	12.5	10.0	10.0	10.0	7.5	7.5	7.5	5.0	5.0	5.0	5.0	5.0	5.0																		
140	50.0	40.0	30.0	30.0	25.0	20.0	20.0	15.0	15.0	15.0	12.5	12.5	10.0	10.0	10.0	10.0	7.5	7.5	7.5	7.5	7.5	5.0	5.0																	
160	50.0	40.0	30.0	30.0	25.0	20.0	20.0	15.0	15.0	15.0	12.5	12.5	10.0	10.0	10.0	10.0	7.5	7.5	7.5	7.5	7.5	5.0	5.0	5.0																
180	60.0	50.0	40.0	30.0	30.0	25.0	20.0	20.0	15.0	15.0	15.0	12.5	12.5	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	7.5	7.5	7.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0									
200	60.0	50.0	40.0	30.0	30.0	25.0	20.0	20.0	15.0	15.0	15.0	12.5	12.5	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	7.5	7.5	7.5	7.5	5.0	5.0	5.0	5.0	5.0	5.0									
220	70.0	50.0	40.0	30.0	30.0	25.0	20.0	20.0	15.0	15.0	15.0	12.5	12.5	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	7.5	7.5	7.5	7.5	7.5	5.0	5.0	5.0	5.0	5.0									
240	70.0	50.0	40.0	30.0	30.0	25.0	20.0	20.0	15.0	15.0	15.0	12.5	12.5	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	7.5	7.5	7.5	7.5	7.5	7.5	5.0	5.0	5.0	5.0									
260	70.0	60.0	50.0	40.0	40.0	30.0	30.0	25.0	20.0	20.0	20.0	15.0	15.0	15.0	15.0	15.0	12.5	12.5	12.5	12.5	10.0	10.0	10.0	10.0	10.0	7.5	7.5	7.5	7.5	7.5	5.0									
A)																																								

SUPERHOLORIB® SHR 51/150 1.00 mm

LEICHTBETON BÉTON LÉGER CALCESTRUZZO LEGGERO LIGHT CONCRETE LC25/28

Nutzlasten in [kN/m²]
Wichtige Hinweise siehe Seite 6

Carico utile in [kN/m²]
Indicazioni importanti vedi pagina 6

Service load in [kN/m²]
For important information see page 6

	0																1																2															
	1.00	1.20	1.40	1.60	1.80	2.00	2.20	2.40	2.60	2.80	3.00	3.20	3.40	3.60	3.80	4.00	4.20	4.40	4.60	4.80	5.00	5.20	5.40	5.60	5.80	6.00	6.20	6.40	6.60	6.80	7.00																	
100	40.0	30.0	30.0	25.0	20.0	20.0	15.0	15.0	15.0	12.5	12.5	10.0	10.0	10.0	10.0	7.5	7.5	7.5	7.5	7.5	5.0	5.0	5.0	5.0																								
120	50.0	40.0	30.0	30.0	25.0	20.0	20.0	15.0	15.0	15.0	12.5	12.5	10.0	10.0	10.0	10.0	10.0	10.0	10.0	7.5	7.5	7.5	7.5	5.0	5.0																							
140	50.0	40.0	30.0	30.0	30.0	25.0	20.0	20.0	20.0	15.0	15.0	12.5	12.5	12.5	10.0	10.0	10.0	10.0	10.0	10.0	7.5	7.5	7.5	7.5	5.0	5.0	5.0	5.0																				
160	60.0	50.0	40.0	30.0	30.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0	12.5	12.5	12.5	12.5	10.0	10.0	10.0	10.0	10.0	10.0	7.5	7.5	7.5	7.5	5.0	5.0	5.0	5.0	5.0																	
180	60.0	50.0	40.0	40.0	30.0	30.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0	15.0	15.0	12.5	12.5	12.5	12.5	12.5	10.0	10.0	10.0	10.0	7.5	7.5	7.5	7.5	7.5	7.5	7.5																	
200	70.0	60.0	50.0	40.0	30.0	30.0	30.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0	15.0	12.5	12.5	12.5	12.5	12.5	10.0	10.0	10.0	10.0	10.0	7.5	7.5	7.5	7.5	7.5	7.5																	
220	70.0	60.0	50.0	40.0	40.0	30.0	30.0	30.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0	15.0	12.5	12.5	12.5	12.5	12.5	10.0	10.0	10.0	10.0	10.0	7.5	7.5	7.5	7.5	7.5																	
240	80.0	60.0	50.0	40.0	40.0	30.0	30.0	30.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0	15.0	12.5	12.5	12.5	12.5	12.5	10.0	10.0	10.0	10.0	10.0	10.0	7.5	7.5	7.5	7.5																	
260	80.0	60.0	50.0	50.0	40.0	30.0	30.0	30.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0	15.0	12.5	12.5	12.5	12.5	12.5	10.0	10.0	10.0	10.0	10.0	10.0	7.5	7.5	7.5	7.5																	
A)																																																



	0																1																2															
	1.00	1.20	1.40	1.60	1.80	2.00	2.20	2.40	2.60	2.80	3.00	3.20	3.40	3.60	3.80	4.00	4.20	4.40	4.60	4.80	5.00	5.20	5.40	5.60	5.80	6.00	6.20	6.40	6.60	6.80	7.00																	
100	40.0	30.0	30.0	25.0	20.0	20.0	15.0	15.0	15.0	12.5	10.0	10.0	10.0	10.0	10.0	7.5	7.5	7.5	7.5	7.5	5.0	5.0	5.0																									
120	50.0	40.0	30.0	30.0	25.0	20.0	20.0	15.0	15.0	15.0	12.5	12.5	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	7.5	7.5	7.5	5.0	5.0																							
140	50.0	40.0	30.0	30.0	30.0	25.0	20.0	20.0	20.0	15.0	15.0	12.5	12.5	12.5	10.0	10.0	10.0	10.0	10.0	10.0	10.0	7.5	7.5	7.5	5.0	5.0	5.0	5.0																				
160	60.0	50.0	40.0	30.0	30.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0	12.5	12.5	12.5	12.5	10.0	10.0	10.0	10.0	10.0	10.0	7.5	7.5	7.5	7.5	5.0	5.0	5.0	5.0	5.0																	
180	60.0	50.0	40.0	40.0	30.0	30.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0	15.0	15.0	12.5	12.5	12.5	12.5	12.5	10.0	10.0	10.0	10.0	10.0	7.5	7.5	7.5	7.5	7.5	7.5																	
200	70.0	60.0	50.0	40.0	30.0	30.0	30.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0	15.0	12.5	12.5	12.5	12.5	12.5	10.0	10.0	10.0	10.0	10.0	7.5	7.5	7.5	7.5	7.5	7.5																	
220	70.0	60.0	50.0	40.0	40.0	30.0	30.0	30.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0	15.0	12.5	12.5	12.5	12.5	12.5	10.0	10.0	10.0	10.0	10.0	7.5	7.5	7.5	7.5	7.5																	
240	80.0	60.0	50.0	40.0	40.0	30.0	30.0	30.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0	15.0	12.5	12.5	12.5	12.5	12.5	10.0	10.0	10.0	10.0	10.0	7.5	7.5	7.5	7.5	7.5																	
260	80.0	60.0	50.0	50.0	40.0	30.0	30.0	30.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0	15.0	12.5	12.5	12.5	12.5	12.5	10.0	10.0	10.0	10.0	10.0	10.0	7.5	7.5	7.5	7.5																	
A)																																																



	0																1																2															
	1.00	1.20	1.40	1.60	1.80	2.00	2.20	2.40	2.60	2.80	3.00	3.20	3.40	3.60	3.80	4.00	4.20	4.40	4.60	4.80	5.00	5.20	5.40	5.60	5.80	6.00	6.20	6.40	6.60	6.80	7.00																	
100	40.0	30.0	30.0	25.0	20.0	20.0	15.0	15.0	15.0	12.5	10.0	10.0	10.0	10.0	10.0	7.5	7.5	7.5	7.5	7.5	5.0	5.0	5.0																									
120	50.0	40.0	30.0	30.0	25.0	20.0	20.0	15.0	15.0	15.0	12.5	12.5	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	7.5	7.5	7.5	5.0	5.0																							
140	50.0	40.0	30.0	30.0	30.0	25.0	20.0	20.0	20.0	15.0	15.0	12.5	12.5	12.5	10.0	10.0	10.0	10.0	10.0	10.0	10.0	7.5	7.5	7.5	5.0	5.0	5.0	5.0																				
160	60.0	50.0	40.0	30.0	30.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0	12.5	12.5	12.5	12.5	10.0	10.0	10.0	10.0	10.0	10.0	7.5	7.5	7.5	7.5	5.0	5.0	5.0	5.0	5.0																	
180	60.0	50.0	40.0	40.0	30.0	30.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0	15.0	15.0	12.5	12.5	12.5	12.5	12.5	10.0	10.0	10.0	10.0	10.0	7.5	7.5	7.5	7.5	7.5	7.5																	
200	70.0	60.0	50.0	40.0	30.0	30.0	30.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0	15.0	12.5	12.5	12.5	12.5	12.5	10.0	10.0	10.0	10.0	10.0	7.5	7.5	7.5	7.5	7.5	7.5																	
220	70.0	60.0	50.0	40.0	40.0	30.0	30.0	30.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0	15.0	12.5	12.5	12.5	12.5	12.5	10.0	10.0	10.0	10.0	10.0	7.5	7.5	7.5	7.5	7.5																	
240	80.0	60.0	50.0	40.0	40.0	30.0	30.0	30.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0	15.0	12.5	12.5	12.5	12.5	12.5	10.0	10.0	10.0	10.0	10.0	7.5	7.5	7.5	7.5	7.5																	
260	80.0	60.0	50.0	50.0	40.0	30.0	30.0	30.0	25.0	20.0	20.0	20.0	20.0	15.0	15.0	15.0	12.5	12.5	12.5	12.5	12.5	10.0	10.0	10.0	10.0	10.0	10.0	7.5	7.5	7.5	7.5																	
A)																																																



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