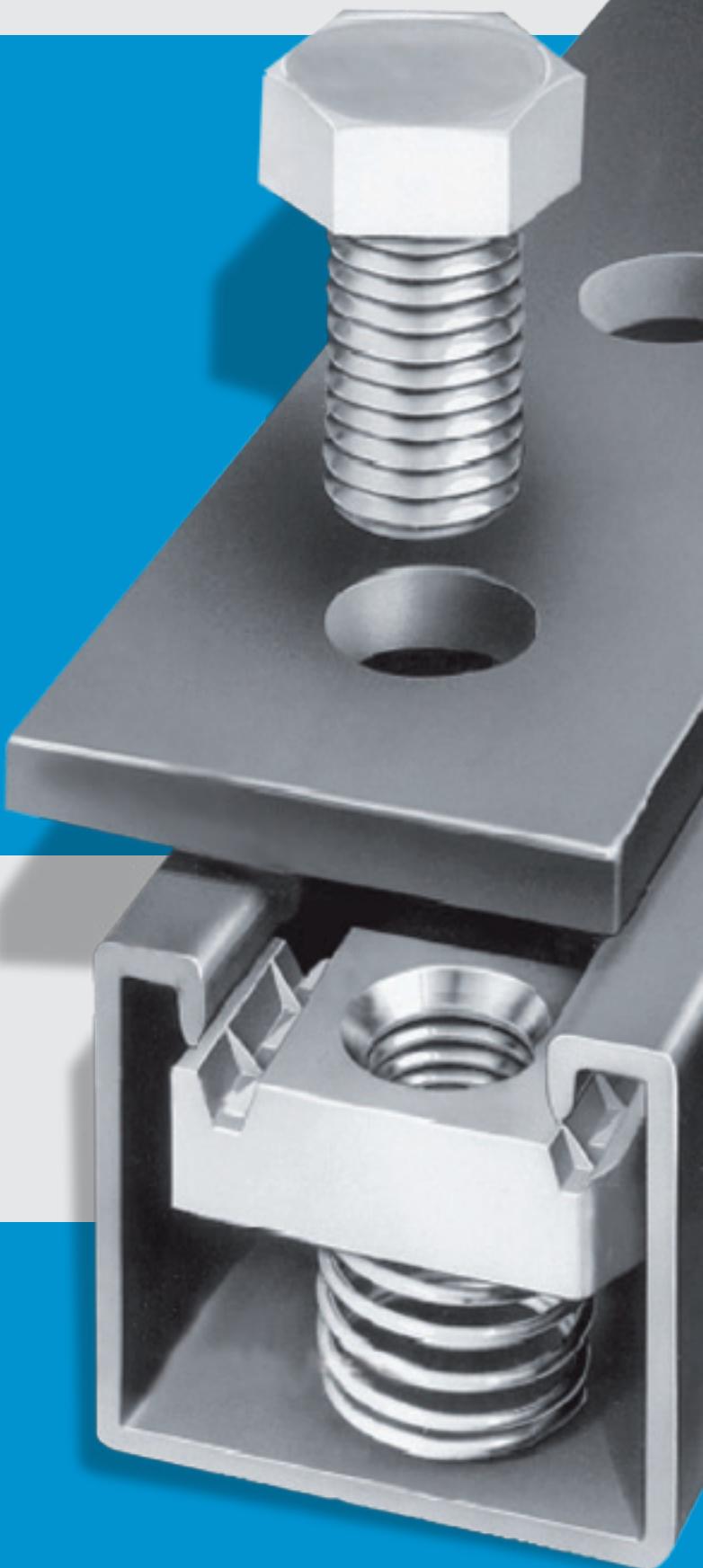


Specialized Factory for Steel Products
SIGMA Factory for Steel Products



C-CHANNEL CATALOGUE



www.ikkgroup.com

INDEX

C-Channel Catalogue

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www.sfsp-ikk.com

ABOUT SFSP



Specialized Factory for Steel Products Co. Ltd

Sigma Factory for Steel Products

www.sfsp-ikk.com

Specialized/Sigma Factory for Steel Products (SFSP) was first established in KSA in 1989 and has been expanding ever since through a variety of products and through its geographical presence.

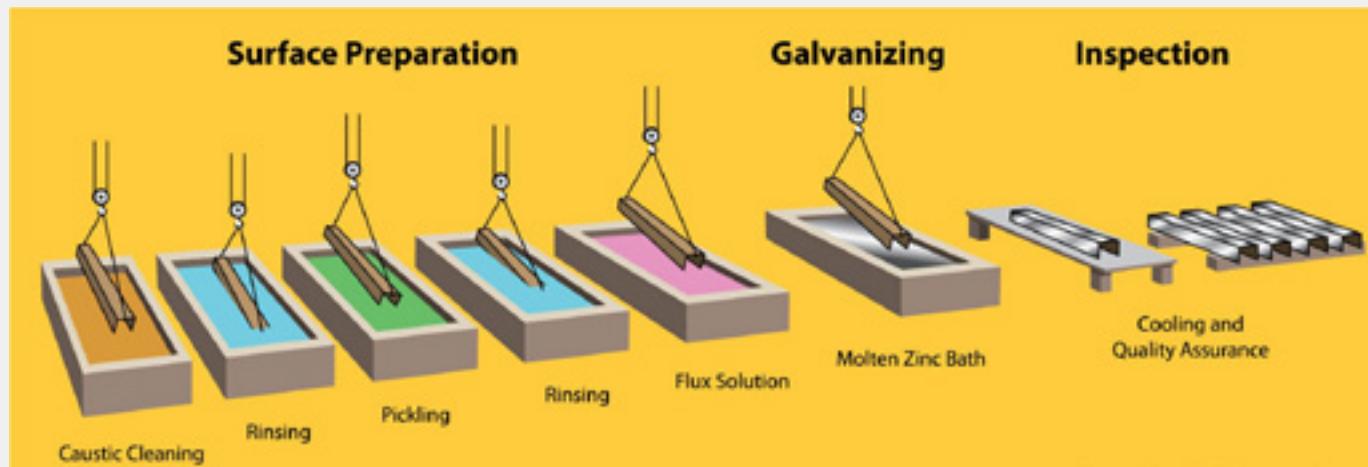
Production at the factory is observed using modern practices of manufacturing methods in the steel construction industry with a definite compliance to international standards of fabrication.

SFSP has manufacturing facilities in KSA, UAE, Egypt, and Lebanon. SFSP adapts quickly and easily to market demands and requirements. The factory is operating a top of the line production machinery, fully automated with highest technology to ensure quality and maintain speed with delicacy.

Quality at SFSP is uncompromised; the factories have been able to acquire ISO 9001: 2008 Quality Management System, ISO 14001:2004 Environmental Management certified factory, and OHSAS 18001:2007 Occupational, Health and Safety Management factory.

HOT-DIP GALVANIZATION

SFSP has an in-house state of the art Hot-Dip Galvanization facility, which permits a full control of the quality of its finished products, offering better services to our clients globally.





Specialized Factory for Steel Products Co. Ltd

www.sfsp-ikk.com

Specialized Factory for Steel Products Co., Ltd, which is part of Isam Khairi Kabbani Group of companies is a leading fabricator of steel construction products serving the Kingdom of Saudi Arabia since 1989.

The factory operates under TQM ISO modules, using the latest modern technology in the steel fabrication and manufacturing industry in conformity with International standards for safety and in compliance with the environmental regulations in the Kingdom.

The factory has inaugurated its new manufacturing facilities which is located in the 3rd Industrial Area of Jeddah with a total built facilities of 37,000 squared meters.



The facilities include two manufacturing areas, a hot dip galvanization advanced section, warehousing areas and administrative building. The project is an advanced environmental low emissions factory built with a definite consideration of the safety of its workers and visitors.





Specialized Factory for Steel Products Co. Ltd

Sigma Factory for Steel Products

www.sfsp-ikk.com

TECHNICAL SERVICES

A crucial factor in the job of a factory is to provide continuous technical services and consultations. That's why SFSP has invested in a professional team of researchers and specialists.

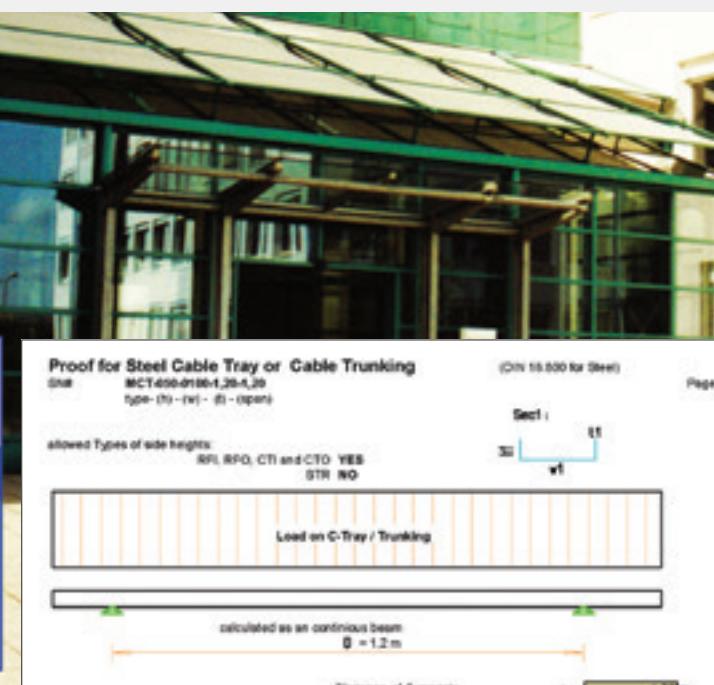
SFSP has recruited brilliant graduates and experienced engineers having the appropriate knowhow on the latest technology changes and development in the steel building materials industry.

The product range is developed and updated according to the relevant standards of fabrication across markets, whilst the business processes are evaluated to achieve maximum efficiency.

SFSP R&D Core Objectives

- Carry out responsibilities effectively in a safe and healthy work environment.
- Develop and implement research programs relevant to the products and solutions introduced and ensure that the results are communicated clearly in-house and among the clients , concisely and accurately.

DESIGN AND ENGINEERING OFFICE - GERMANY



Proof for Steel Cable Tray or Cable Trunking
(DIN 18.800 for Sheet)
Sect. I
Page 1

allowed Types of side heights:
RPI, RPO, CTD and CTO: YES
STR: NO

Load on C-Tray / Trunking

calculated as an continuous beam:
 $B = 1.2 \text{ m}$

Distance of Supports
Load on Cable Tray

Σ	1.20 m
L	0.74 m
wf	0.00 kN

Cable Tray
Sect. I:

wf	0.00 kN
B	1.20 m
t	0.20 m

Center Load only possible for $wf < 300 \text{ mm}$!

Mechanical Properties

SN.	Description	Equations	Figures	unit
1	Type of materials used	DIN EN 10025	S 235 JR02	
2	Allow. 0.2 Yield Stress up to 50°C	$F_{y,0.2} = F_{y,0} \cdot F_{T,0}$	21.82 kN/mm ²	
3	Allow. Shear Stress		12.60 kN/mm ²	
4	Allow. Deflection	DIN 10025 =	6.00 mm	
5	Modulus of Elasticity		21 000 kNm/mm ²	

Applied Loads

1 Distance of Supports	$D =$	120.00 cm
2 Self Weight Cable	$W_{G,0}$	1.74 kNm
3 Self Weight Cable Tray	$W_{G,0} <$	0.02 kNm
4 Self Weight	$W_{G,1} = W_{G,0} + W_{G,0}$	1.76 kNm

Design of Elements

1	2	3	4
Cable Tray / Trunking			
Description			
Equations			
Figures			
unit			

Geometrical Properties of Sect. I

Unitech Deutschland GmbH is the design office of Unitech for Building and Construction Materials and is situated in Stuttgart, Germany.

SOCIAL RESPONSIBILITY

Being socially responsible is a part of who we are and how we do our business. We aim to provide useful products and services, to provide jobs and development opportunities for our communities, and to gain satisfaction through meaningful work.

We make a difference by acting on the values and principles of our societies and we inspire others to do so. At SFSP, we anticipate and reduce threats caused by environmental changes or natural disasters, and we are well adapted to significant social changes.

We contribute to a more sustainable society by means of value and support to our consumers, supply chains, and stakeholders. We are keen to identify ways they can improve our impacts on the people and places we work and live in, and thereby become more valuable and valued members of society.

- Organizational governance: We promote accountability and transparency at all levels, thus, promoting responsibility
- Human care: We treat individuals with respect; and make efforts to help members of vulnerable groups
- Labor practices: We provide just, safe and favorable conditions to workers
- Environment: At SFSP, we Identify and improve environmental impacts of our operations, including the resource use of natural resources and waste disposal.



- Fair operating practices: Practicing accountability and fairness in dealings with other businesses

At SFSP, we are committed to continuous improvement ongoing learning, process review and innovative thinking that foster new initiatives; and better practices. Our environmental programs evolve to meet today's changing needs while; protecting resources for future; generations.

HEALTH AND SAFETY

The Factory Management regard the health and safety of the employees, clients and all others that may be affected by their operations to be of a major importance.

In support of this, the management promotes health and safety throughout the Factory's operations and endeavour to engender a positive attitude in all employees towards the prevention of accidents and maintenance of healthy working arrangements.

The Factory satisfies the requirements of the Health, Safety and related legislation by setting out the responsibilities of all levels of staff and the arrangements for carrying out those responsibilities and in particular do what is reasonably practicable to:

1. Maintains safe & healthy working conditions.

2. Ensures that all facilities and equipment are safe and properly maintained.
3. Provides products that can be applied and used safely and without risk to health.
4. Provides and maintain working procedures, that are safe and without risk to health, throughout the its operations in respect of:
 - The use, handling, storage, transports and disposal of materials and substances.
 - The use of factory equipment.
 - Potential emergency situations, including first aid, fire and escape of substances.
5. Ensure the competence of employees.

The factory is an OHSAS 18001:2007 Occupational, Health and Safety Management certified Factory.



ENVIRONMENTAL AWARENESS

SFSP is committed to the following:

- Compliance with all statutory and regulatory requirements related to its activities, products and services and the environmental aspects.
- Identifying quality and environmental objectives by review and audit of the processes both in-house and on-site.
- Formally setting objectives based on the results of the process reviews and their significance in relation to their impact on the environment and the continual improvement of the quality and environmental management system.
- Implementing management programs to achieve these objectives.
- Investing in a well-trained and motivated workforce.
- Working closely with suppliers and customers to ensure mutual understanding and benefits of the environmental aspects consideration.
- Reviewing our policy and objectives as part of the Management Review Process.
- Communicating this policy to all persons working for or on behalf of the organization.
- Preventing and minimizing Pollution to the environment.



SFSP operates under environmental management system certification BS EN ISO 14001:2004 and maintain it through registration and annual review.



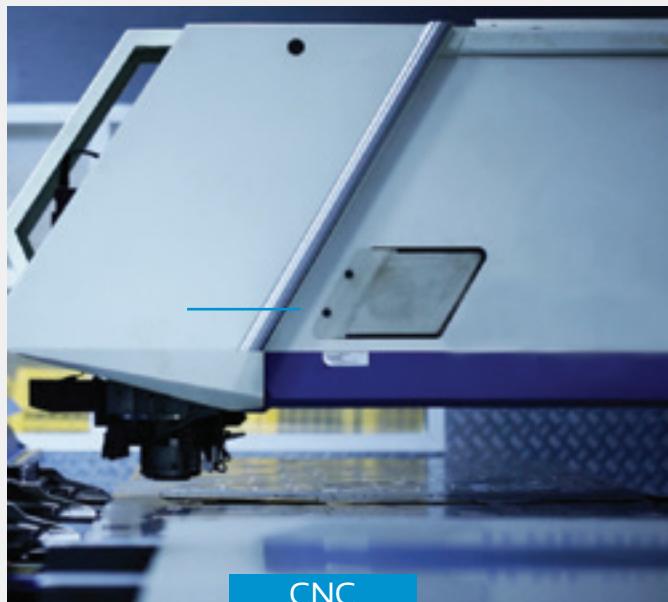
SFSP facilities are equipped with the most technologically advanced machinery amongst are Laser Cut Machines, Robot Bending Sets, Welding Robot Sets, sophisticated Cable Management Production Lines, as well as Specialized Industrial Sections for its Hot Dip Galvanization facilities.



CNC MACHINES



WELDING
ROBOT
SETS



CNC
PUNCHING



FIBER LASER
CUT



ROBOTIC
BENDING
CELL

SFSP CERTIFICATION

ISO 45001: 2018 (Occupational Health & Safety)

Specialized Factory for Steel Products Co. Ltd.(SFSP)

Jeddah-Jazan Road, Industrial City No. 3, P.O. Box 50533, Jeddah, 21533, Saudi Arabia

has been assessed and certified as meeting the requirements of

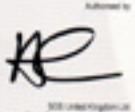
ISO 45001:2018

For the following activities:

Manufacture and Sales of Steel Fabricated Products such as Cladding Fixation, Gypsum Board Accessories, Plastering Accessories, Galvanized and Aluminium Cable Trays and Ladders, Block Ladder, Pipe Hanger and Clamps, Channels and Garbage and Linen Chutes and Hot Dip Galvanization

This certificate is valid from 19 February 2019 until 19 February 2022 and remains valid subject to satisfactory surveillance audits. Recertification audit due a minimum of 60 days before the expiration date. Issue 1. Certified since 19 February 2019.

Authorized to



SGS United Kingdom Ltd
Rossmore Business Park, Elstree Park, Hatfield, Herts SG10 2EN, UK
T +44 (0)170 361 4666 F +44 (0)170 361 4665 www.sgs.com

HC SGS ISO9001 2018 0108

Page 1 of 1



ISO 9001: 2015 (Quality Management Systems)

Specialized Factory for Steel Products Co. Ltd. (SFSP)

Jeddah-Jazan Road, Industrial City No. 3, P.O. Box 50533, Jeddah, 21533, Saudi Arabia

has been assessed and certified as meeting the requirements of

ISO 9001:2015

For the following activities:

Manufacture and Sales of Steel Fabricated Products such as Cladding Fixation, Gypsum Board Accessories, Plastering Accessories, Galvanized and Aluminium Cable Trays and Ladders, Block Ladder, Pipe Hanger and Clamps, Channels and Garbage and Linen Chutes and Hot Dip Galvanization

This certificate is valid from 20 December 2016 until 20 December 2021 and remains valid subject to satisfactory surveillance audits. Recertification audit due a minimum of 60 days before the expiration date. Issue 4. Certified since 20 December 2009.



Authorized to

SGS United Kingdom Ltd
Rossmore Business Park, Elstree Park, Hatfield, Herts SG10 2EN, UK
T +44 (0)170 361 4666 F +44 (0)170 361 4665 www.sgs.com

HC SGS ISO9001 2015 0108

Page 1 of 1



0005

14001: 2015 (Environmental Management System)

Specialized Factory for Steel Products Co. Ltd. (SFSP)

Jeddah-Jazan Road, Industrial City No. 3, P.O. Box 50533, Jeddah, 21533, Saudi Arabia

has been assessed and certified as meeting the requirements of

ISO 14001:2015

For the following activities:

Manufacture and Sales of Steel Fabricated Products such as Cladding Fixation, Gypsum Board Accessories, Plastering Accessories, Galvanized and Aluminium Cable Trays and Ladders, Block Ladder, Pipe Hanger and Clamps, Channels and Garbage and Linen Chutes and Hot Dip Galvanization

This certificate is valid from 4 October 2018 until 4 October 2021 and remains valid subject to satisfactory surveillance audits. Recertification audit due a minimum of 60 days before the expiration date. Issue 1. Certified since 4 October 2018.

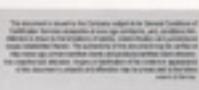
Authorized to

SGS United Kingdom Ltd
Rossmore Business Park, Elstree Park, Hatfield, Herts SG10 2EN, UK
T +44 (0)170 361 4666 F +44 (0)170 361 4665 www.sgs.com



0005

Page 1 of 1



STD 096 (Q-Mark Certificate)



STD 096
(Q-Mark Certificate)



CERTIFICATE OF REGISTRATION

This is to certify that

Sigma Factory for Steel Products

P.O. Box 37091
Dubai Industrial City
Dubai
United Arab Emirates

Meets the requirements of the Exova BM TRADA Q-Mark International Fire Door Manufacture scheme to **STD 096 - Issue 3 - 01/12/2015** which only operates in Bahrain, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Oman, Qatar, Saudi Arabia and The United Arab Emirates for the products on the attached schedule

Karen Prendergast
Sector Director - Certification
Exova BM TRADA

Certificate Number:
476
Date of Initial Certification:
16 June 2014
Date of last Issue:
13 October 2017
Date of Expiry:
15 June 2020

Exova (UK) Ltd, (T/A Exova BM TRADA), Chilham House, Stocking Lane, High Wycombe, Buckinghamshire, HP14 4HQ, UK
Registered Office: Exova (UK) Ltd, Lockheed Industrial Estate, Newbridge, Wokingham, RG19 8PL, United Kingdom, Reg No. SC070429.
This certificate remains the property of Exova (UK) Ltd. This certificate and all copies or reproductions of the certificate shall be returned to Exova (UK) Ltd or destroyed if requested. Further information regarding the terms of issue and verification of this certificate is available through Exova BM TRADA or at the above address or at www.exovabctrada.com.
The use of the UKAS accreditation mark indicates accreditation in respect of those activities covered by the accreditation certification 012
Multi-site clients - The scope of certification shown above includes the participating sites shown on the registration schedule
Page 1 of 2

ISO 14001: 2015 (Environmental Management System)



CERTIFICATE OF REGISTRATION

This is to certify that

Sigma Factory for Steel Products

P.O. Box 37091
Saih Suhail - 3, 4 Round About
Dubai Industrial City
Dubai
United Arab Emirates



has been audited and found to meet the requirements of standard
ISO 14001:2015 Environmental Management System

Scope of certification:
Trading and Manufacturing of all kinds of Steel related Construction Materials

Karen Prendergast
Sector Director - Certification
Exova BM TRADA

Certificate number: 2524

Issue number: 2018-02
Certificate start date: 22 September 2018
Certificate expiry date: 21 September 2021
Date of initial certification: 22 September 2015

Exova (UK) Ltd, (T/A Exova BM TRADA), Chilham House, Stocking Lane, High Wycombe, Buckinghamshire, HP14 4HQ, UK
Registered Office: Exova (UK) Ltd, Lockheed Industrial Estate, Newbridge, Wokingham, RG19 8PL, United Kingdom, Reg No. SC070429.
This certificate remains the property of Exova (UK) Ltd. This certificate and all copies or reproductions of the certificate shall be returned to Exova (UK) Ltd or destroyed if requested. Further information regarding the terms of issue and verification of this certificate is available through Exova BM TRADA or at the above address or at www.exovabctrada.com.
The use of the UKAS accreditation mark indicates accreditation in respect of those activities covered by the accreditation certification 012

OHSAS 18001: 2018 (Health & Safety Management System)



CERTIFICATE OF REGISTRATION

This is to certify that

Sigma Factory for Steel Products

P.O. Box 37091
Saih Suhail - 3, 4 Round About
Dubai Industrial City
Dubai
United Arab Emirates

has been audited and found to meet the requirements of standard
OHSAS 18001:2007 Health & Safety Management System

Scope of certification:
Trading and Manufacturing of all kinds of Steel related Construction Materials

Karen Prendergast
Sector Director - Certification
Exova BM TRADA

Certificate number: 1006
Issue number: 2018-01
Certificate start date: 22 September 2018
Certificate expiry date: 11 March 2021
Date of initial certification: 22 September 2015

Exova (UK) Ltd, (T/A Exova BM TRADA), Chilham House, Stocking Lane, High Wycombe, Buckinghamshire, HP14 4HQ, UK
Registered Office: Exova (UK) Ltd, Lockheed Industrial Estate, Newbridge, Wokingham, RG19 8PL, United Kingdom, Reg No. SC070429.
This certificate remains the property of Exova (UK) Ltd. This certificate and all copies or reproductions of the certificate shall be returned to Exova (UK) Ltd or destroyed if requested. Further information regarding the terms of issue and verification of this certificate is available through Exova BM TRADA or at the above address or at www.exovabctrada.com.
The use of the UKAS accreditation mark indicates accreditation in respect of those activities covered by the accreditation certification 012

ISO 9001: 2015 (Quality Management System)



CERTIFICATE OF REGISTRATION

This is to certify that

Sigma Factory for Steel Products

P.O. Box 37091
Saih Suhail - 3, 4 Round About
Dubai Industrial City
Dubai
United Arab Emirates



has been audited and found to meet the requirements of standard
ISO 9001:2015 Quality Management System

Scope of certification:
Trading and Manufacturing of all kinds of Steel Related Construction Materials

Karen Prendergast
Sector Director - Certification
Exova BM TRADA

Certificate number: 5965
Issue number: 2018-02
Certificate start date: 23 February 2018
Certificate expiry date: 22 February 2021
Date of initial certification: 23 February 2018

Exova (UK) Ltd, (T/A Exova BM TRADA), Chilham House, Stocking Lane, High Wycombe, Buckinghamshire, HP14 4HQ, UK
Registered Office: Exova (UK) Ltd, Lockheed Industrial Estate, Newbridge, Wokingham, RG19 8PL, United Kingdom, Reg No. SC070429.
This certificate remains the property of Exova (UK) Ltd. This certificate and all copies or reproductions of the certificate shall be returned to Exova (UK) Ltd or destroyed if requested. Further information regarding the terms of issue and verification of this certificate is available through Exova BM TRADA or at the above address or at www.exovabctrada.com.
The use of the UKAS accreditation mark indicates accreditation in respect of those activities covered by the accreditation certification 012

SFSP CERTIFICATION

BS EN 61537:2007 (KEMA - KEUR Certified For Cable Management Products)

CERTIFICATE

Issued to:
Applicant:
Isam Kabbani Trading Est. (Untech)
Rashidiya
Dubai, United Arab Emirates

Manufacturer/Licensee:
Sigma Factory for Steel Products (SFSP)
Saif Shuaib 3, 4/R/A, Dubai Industrial City,
Dubai, United Arab Emirates

Product : Cable management system
Trade name : SFSP
Type : IE-CT-X-10, IE-CT-X-12, IE-CT-X-15, IE-CT-X-20

The product and any acceptable variation thereto is specified in the Annex to this certificate and the documents therein referred to.

DEKRA hereby declares that the above-mentioned product has been certified on the basis of:
 – a type test according to the standard IEC 61537:2006 and EN 61537:2007
 – an inspection of the production location according to CENELEC Operational Document CIG 021
 – a certification agreement with the number 2156954

DEKRA hereby grants the right to use the KEMA-KEUR certification mark.

The KEMA-KEUR certification mark may be applied to the product as specified in this certificate for the duration of the KEMA-KEUR certification agreement and under the conditions of the KEMA-KEUR certification agreement.

This certificate is issued on: 20 January, 2014 and expires upon withdrawal of one of the above mentioned standards.

Certificate number: 2156954.01

DEKRA Certification B.V.


drs. G.J. Zoetbrood
Managing Director


H.R.M. Barends
Certification Manager

© Integral publication of this certificate is allowed

ACCREDITED BY THE
DUTCH ACCREDITATION
COUNCIL




DEKRA Certification B.V., Meander 1051, 6825 MJ Arnhem, P.O. Box 5185, 6802 ED Arnhem, The Netherlands
T +31 88 98 83000 F +31 88 98 83100 www.dekra-certification.com Registered Arnhem 09065396

BS EN 61537:2007 (KEMA - KEUR BS Certified For Cable Management Products)

CERTIFICATE

Issued to:
Applicant:
Isam Kabbani Trading Est. (Untech)
Rashidiya
Dubai, United Arab Emirates

Manufacturer/Licensee:
Sigma Factory for Steel Products (SFSP)
Saif Shuaib 3, 4/R/A, Dubai Industrial City,
Dubai, United Arab Emirates

Product : Cable management system
Trade name : SFSP
Type : IE-CT-X-10, IE-CT-X-12, IE-CT-X-15, IE-CT-X-20

The product and any acceptable variation thereto is specified in the Annex to this certificate and the documents therein referred to.

DEKRA hereby declares that the above-mentioned product has been certified on the basis of:
 – a type test according to the standard BS EN 61537:2007 based on IEC 61537:2006
 – an inspection of the production location according to CENELEC Operational Document CIG 021
 – a certification agreement with the number 2156954

DEKRA hereby grants the right to use the KEMA-KEUR BS certification mark.

The KEMA-KEUR BS certification mark may be applied to the product as specified in this certificate for the duration of the KEMA-KEUR BS certification agreement and under the conditions of the KEMA-KEUR BS certification agreement.

This certificate is issued on: 3 February, 2014 and expires upon withdrawal of one of the above mentioned standards.

Certificate number: 2156954.02

DEKRA Certification B.V.


drs. G.J. Zoetbrood
Managing Director


H.R.M. Barends
Certification Manager

© Integral publication of this certificate is allowed

ACCREDITED BY THE
DUTCH ACCREDITATION
COUNCIL




DEKRA Certification B.V., Meander 1051, 6825 MJ Arnhem, P.O. Box 5185, 6802 ED Arnhem, The Netherlands
T +31 88 98 83000 F +31 88 98 83100 www.dekra-certification.com Registered Arnhem 09065396

UL Certification* (Cable Trays)

CERTIFICATE OF COMPLIANCE

Certificate Number: 20160816-E483358
Report Reference: E483358-20160816
Issue Date: 2016-AUGUST-16

Issued to: Sigma Factory for Steel Products
Saif Shuaib 3, 4 R/A Dubai Industrial City
Opposite DEWA Substation
Dubai UNITED ARAB EMIRATES

This is to certify that representative samples of CABLE TRAYS
Steel Channel Cable Tray, Ventilated, Heavy Duty (HCT),
Very Heavy Duty (VCT) cable trays.

Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.

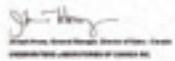
Standard(s) for Safety: ANSI/NFPA 70, "National Electrical Code" (NEC)
Additional Information: See the ULC Online Certification Directory at www.ulc.ca for additional information

Only those products bearing the ULC Listing Mark should be considered as being covered by ULC's Listing and Follow-Up Service.

The ULC Listing Mark generally includes the following elements: the symbol ULC in a circle  with the word "LISTED"; a control number (may be alphanumeric) assigned to ULC; and the product category name (product identifier) as indicated in the appropriate ULC Directory.

To confirm the status, validate the above information via the online directory.

Look for the ULC Listing Mark on the product.


Bruce Mavrinac, Director North American Certification Program
UL LLC



UL Certification* (Chute Type Fire Doors)

CERTIFICATE OF COMPLIANCE

Certificate Number: 20170811-R38825
Report Reference: R38825-20170811
Issue Date: 2017-AUGUST-11

Issued to: Sigma Factory for Steel Products
Saif Shuaib 3, 4 R/A Dubai Industrial City
Opposite DEWA Substation
Dubai UNITED ARAB EMIRATES

This is to certify that representative samples of CHUTE-TYPE FIRE DOORS
Chute-type fire door and frame assembly of the insulated type, rated up to and including 2 hr, 450°F Temperature Rise Rating.

Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.

Standard(s) for Safety: ANSI/UL 10B, Fire Tests of Door Assemblies
Additional Information: See the UL Online Certifications Directory at www.ul.com/database for additional information

Only those products bearing the UL Certification Mark should be considered as being covered by UL's Certification and Follow-Up Service.

Look for the UL Certification Mark on the product.


Bruce Mavrinac, Director North American Certification Program
UL LLC





SFSP PRODUCTS

SFSP produces a variety of products ranging from cable management systems; cable trays, cable ladders, basket trays, trunkings and support systems, to mechanical cladding fixations, steel lintels and block work accessories, Plaster beads, expanded metal and block work reinforcement, strut channel systems, pipe clamps & hangers, gypsum profiles as well as garbage and linen chutes. With the introduction of new machines and the enhancement of production methods, SFSP continues to develop its production methods systematically as well as thoroughly. Its design office in Stuttgart, Germany provides a comprehensive design and calculation case studies, enabling the factory to have the safety factors required for the usage of its products.

CABLE TRAYS & ACCESSORIES

Cable Trays are designed to meet most requirements of cable and electrical wire installations and comply to local and international standards of fabrications and finishes.



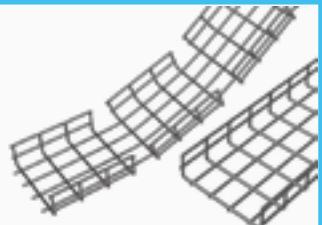
CABLE LADDERS (WELDED & SWAGED)

Cable Ladders of different side heights are available upon request.



BASKET TRAYS & ACCESSORIES

SFSP's Basket Tray systems make connections fast and simple with limited need for tools. Its design allows for continuous airflow, and prevents heating up of cables. SFSP's Basket Tray comes in a full range of sizes and is made with high-strength welded steel wires.



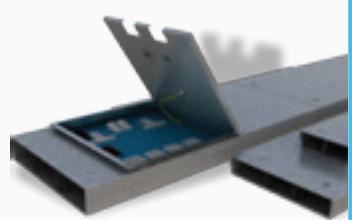
CABLE TRUNKINGS

Cable Trunkings and Accessories are offered in a comprehensive range. Mill galvanized, hot-dip galvanized, and powder coated are the various finishes produced in our factories.



UNDERFLOOR TRUNKING

Underfloor Trunking Systems solutions incorporate a range of products for the distribution of power and data services , it is a coordinated set of containments that protect, segregate, contain, and route cables within a given environment.



CABLE MANAGEMENT SUPPORT SYSTEMS

Cable Support Systems are well designed to provide necessary support for cable trays, cable ladders and trunkings. Cable supports are manufactured according to common standards from high quality raw materials.



C-CHANNEL STRUT SYSTEMS

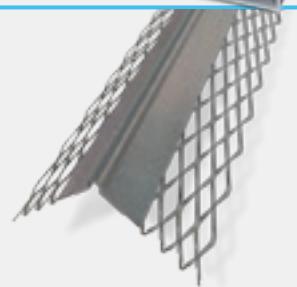
SFSP's Metal Framing Systems provide an economical solution for electrical, mechanical and industrial supports with a wide variety of applications in the construction industry.

Applications: - Pipe and Conduit Supports - Tunnel Pipe Stanchions - Racks and Shelvings - Wall Framings.



EXPANDED METALS, PLASTERERS` BEADS

Expanded Metals help the formation of joints, protection of corners and resistance against cracks, chips and impact damage.



BLOCK LADDER REINFORCEMENT

SFSP ladder and truss types are used for the reinforcement of brick and block masonry to give improved tensile strength to walls subjected to lateral loading e.g. wind and seismic. SFSP block reinforcements reduces the risk of cracking either at stress concentration around opening.

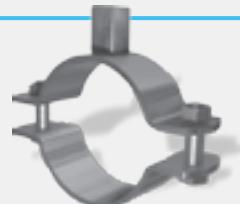


STEEL LINTELS & BLOCK WORK ACCESSORIES

Steel Lintels provide a combination of strength and light weight, resulting in efficient load bearing performance and increased productivity on site. They are characterized by their ease of installation in addition to time as well as money saving.

PIPE CLAMPS & HANGERS

Pipe Clamps and Hangers from SFSP used in the support of pipes and equipments are manufactured according to the highest standards of fabrication. A diversified choice of Pipe Hangers, Pipe Clamps, EMT Straps, Omega Clamps, Beam Clamps, J and U-Bolts and Threaded Accessories.



MARBLE & GRANITE FIXINGS

Stangle Cladding Fixation includes design, calculation and production of several types of mechanical fixings and accessories used for cladding purposes. Stainless and galvanized steel are among the various materials used in the fabrication.



DRY WALL & CEILING PROFILES

SFSP provides a complete product range for dry wall and ceiling constructions. Studs, Runners, Furring Channels, Ceiling Channels and Wall Angles are among the range of products produced to service the dry wall installers.



GARBAGE & LINEN CHUTES

Chutes from SFSP are very convenient, simple and low cost method of controlling and disposing of refuse and linen. Chutes meet the most stringent requirements of environmental health and safety. Chutes are used as original equipment in new buildings, such as : Hotels, Hospitals, High Rises and Residential Towers.



SFSP Products are solely distributed by UNITECH for Building and Construction Materials

All Products Manufactured by SFSP are Solely Distributed by SFSP Sister Companies in the Following Countries

KSA

Isam Kabbani & Partners for Building and Construction Materials Co., Ltd.
شركة عاصم قباني وشركاه ملواط الأنشاء والتعمير المحدودة

BAHRAIN

Isam Kabbani Trading Est.
مؤسسة عاصم قباني التجارية

UAE

Issam Kabbani Trading Est.
مؤسسة عاصم قباني للتجارة

KUWAIT

Hassan Kabbani for General Contracting Est.
مؤسسة حسان قباني للمقاولات العامة للمباني

OMAN

Isam Kabbani & Partners Trading Co.
شركة عاصم قباني وشركاه للتجارة

EGYPT

UNITECH Egypt for Building Materials
شركة يونitech مصر ملواط البناء

JORDAN

Jordan Build Co. for Building & Construction Materials
شركة بناء الأردن ملواط الإنشاء والتعمير والكهرباء

LEBANON

UNITECH ME s.a.r.l
شركة يونitech ميدل إيست ش.م.م

SFSP CUSTOMER SERVICE CALL CENTER

KSA

+966 13 8590097, Ext. 3214

UAE

+971 4 8181925, Ext. 4269



IKK Group of Companies

The IKK Group is a major business institution, serving most of the Arab World in the industrial, construction and trading fields, as well as in specialized maintenance and services.

Today, the IKK Group of Companies is a pioneer in waterproofing, weatherproofing, building material supplies, UPVC and CPVC and high density polyethylene pipes and fittings and several other products for the construction industry.

The Group is also represented in the sanitary products, steel production, kitchen manufacturing, telecommunications, food, decoration, re-insurance and real estate business domain.

Composed of 60 companies, the IKK Group operates through almost 200 divisions, branches and outlets; it is spread over 12 countries, covering all major cities in the region and employing around 13,000 employees.

Our Vision is to maintain and improve our leading position as a contractor whose reputation is built on the ability to completely satisfy customers by providing high quality services. As specialists in their respective fields, our teams of professionals are dedicated to a standard of excellence for quality and performance, through continuous development, which will set standards in our industry.

We are simply providing solutions for a future of success.

Our mission is to provide our part of the Arab World with local and reliable services in a variety of sectors and products.

To create employment to thousands of personnel and in-house training for hundreds of young Arab graduates in crucial sectors to the benefit of the IKK Group, the graduates themselves and their own communities.

To set a good example of our basic business philosophy: "Hire well, train well, pay well and treat well."

UNITECH ISAM KABBANI & PARTNERS FOR BUILDING & CONSTRUCTION MATERIALS

Isam Kabbani & Partners for buildings & construction materials co. Ltd (UNITECH) which is part of the IKK group of companies is recognized and acknowledged for the quality and reliability of its products and services as well as for the commitment, professionalism and experience of its employees.

Isam Kabbani & partners for buildings & construction materials co. Ltd (UNITECH) core values are to offer value products and services to its clients, to work closely with them in a lasting business partnership that provides an outstanding performance.

A partnership based on trust, harmony, and a hard to beat services and solutions.

Our Factories have acquired, in addition to ISO 9001:2008 Quality Management System, the ISO 14001:2004 Environmental Management System.

Our care for the environment has been translated via Isam Kabbani & partners for buildings & construction materials co. Ltd (UNITECH)'s membership in the US Green Building Council as a Golden Member.

Our Vision
UNITECH to be the Customer's First Choice.

Our Mission

We have the conviction to be the leader in building & construction industry through:

- Providing Excellence in Services with Passionate and Educated Sales Force
- Strengthen Culture through Unified Sense of Purpose
- Innovative Product Range which is Customer Centric
- Reputable and Quality Service Company
- Attracting, Engaging and Retaining Talent



GENERAL INFORMATION



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Channel

SFSP's metal framing channel is cold formed on modern rolling machines from low carbon steel manufactured according to BS 6946:1988. A continuous slot provides the ability to make attachments at any point.

Finishes

Standard Finishes: Pre-Galvanized finish (ASTM A653M coating G90 and G60). Hot Dip Galvanized after fabrication (ASTM A123 or BS EN ISO1461:2009). Other custom coatings are available upon request.

Lengths

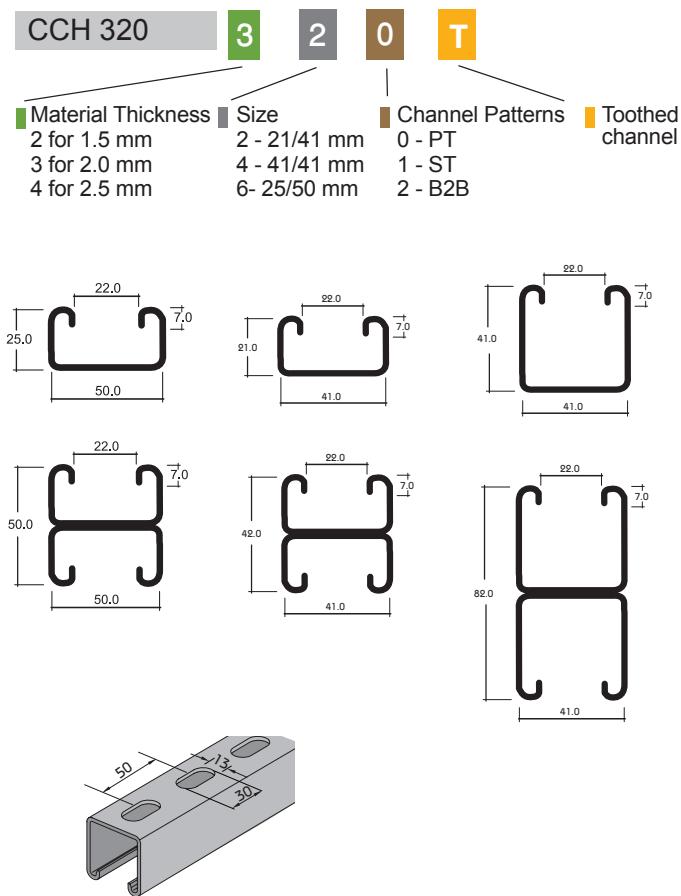
Standard length: 3000mm with \pm 3.2mm length tolerance.
Custom lengths available upon request.

METAL FRAMING CHANNELS

Selection Chart

Part No	Channel Dimensions		Thickness
	Height "H"	Width "W"	
CCH - 220/221	21.0 mm	41.0 mm	1.5 mm
CCH - 240/241	41.0 mm	41.0 mm	1.5 mm
CCH - 260/261	25.0 mm	50.0 mm	1.5 mm
CCH - 320/321	21.0 mm	41.0 mm	2.0 mm
CCH - 340/341	41.0 mm	41.0 mm	2.0 mm
CCH - 360/361	25.0 mm	50.0 mm	2.0 mm
CCH - 420/421	21.0 mm	41.0 mm	2.5 mm
CCH - 440/441	41.0 mm	41.0 mm	2.5 mm
CCH - 460/461	25.0 mm	50.0 mm	2.5 mm

For Toothed Channel add "T" after the Part no. ex: CCH-220T



CHANNEL HOLE PATTERNS

PT Type Channel

Part No	Thick. mm.	Height "H"
CCH-220	1.5	21.0
CCH-240	1.5	41.0
CCH-260	1.5	25.0
CCH-320	2.0	21.0
CCH-340	2.0	41.0
CCH-360	2.0	25.0
CCH-420	2.5	21.0
CCH-440	2.5	41.0
CCH-460	2.5	25.0

PT Plain Type



ST Type Channel

Part No	Thick. mm.	Height "H"
CCH-221	1.5	21.0
CCH-241	1.5	41.0
CCH-261	1.5	25.0
CCH-321	2.0	21.0
CCH-341	2.0	41.0
CCH-361	2.0	25.0
CCH-421	2.5	21.0
CCH-441	2.5	41.0
CCH-461	2.5	25.0

ST Slotted Type



B2B Type Channel

Part No	Thick. mm.	Height "H"
CCH-222	1.5	42.0
CCH-242	1.5	82.0
CCH-262	1.5	50.0
CCH-322	2.0	42.0
CCH-342	2.0	82.0
CCH-362	2.0	50.0
CCH-422	2.5	42.0
CCH-442	2.5	82.0
CCH-462	2.5	50.0

B2B Type



Toothed channel type



For Toothed Channel add "T" after the Part no. ex: CCH-220T

MATERIALS

Mild Steel - Plain

A. Hot Rolled Steel Plates, Sheets and Coils S235 JR, S355 JR,

As per:

EN 10025 -2 / DIN 17100 / BS 4360 / ASTM A 1011/ ASTM A 1011-01a

JIS 3101 / JIS 3106 / GB 700 / GB / T1591.

ASTM A 907 / ASTM A 1018M.

ASTM A 570M / ASTM A 572M.

B. Cold Rolled Steel DC 01,

As per:

EN 10130 / DIN 1623, Part 2 / BS 1449:1 / ASTM A366 / ASTM A 1008 / JIS G 3141 / GB 699.

EN 10131 / ASTM A 568M



Mild Steel - Galvanized

C. Continuously Pre- Galvanized Hot-Dip Zinc Coated Steel DX 51D + Z,

As per:

EN 10327 / DIN 17162 / BS 2989/ ASTM A 527M / ASTM A 653M / JIS G 3302.

EN 10346 / EN 10326 / EN 10142 / ASTM A 526, 527, 528



D. Electro Galvanized Steel (Electrolytic Coating) DC01 + ZE,

As per:

EN 10152 / DIN 17163 / ASTM A591 / JIS G 3313 / JIS G 3141/BS 1449:1

EN 10131



AluZink Steel

E. AluZink Steel DX 51D + AZ,

As per:

EN 10215 / EN 10143/ DIN 55928 / ASTM A 792



Stainless Steel

F. Austenitic Stainless Steels AISI 304 & 316,

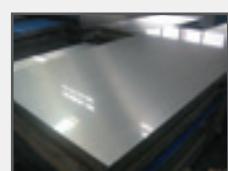
As per:

ASTM A 240 /EN 10088-2/ DIN 17400 / BS 1449:2 /

ASTM A480 / ASTM A666 / ISO 3506 / EN 10028-7 /JIS G 4304

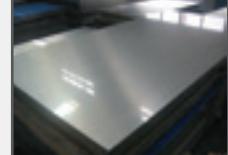
F.1 Stainless Steel Fasteners EN 3506

F.2 Stainless Steel Wire BS 1554 ,ASTM A276



Aluminium

G. Aluminium 5052 & 6063



FINISHES

1- Hot-DIP Galvanization After Fabrication,

As per:

ASTM A 123 / ASTM A 153 / ISO 1461.

BS 729 / DIN 50976



2- Zinc Electroplating After Fabrication,

As per:

ASTM B633 / EN 2081 / EN 12329 / ISO 4042/

BS 1706 / BS 7371-12 / BS 3382 / DIN 50961



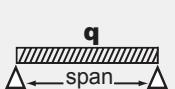
3- Powder Coating

Epoxy / Polyester / Epoxy & Polyester

BS 3900 / ISO 2409 / ISO 1519 / ISO 1520



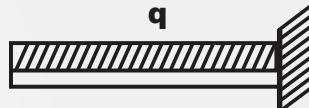
TECHNICAL DATA

Load and Support Condition	Load Factor	Deflection Factor
Simple Beam - Uniform Load 	1.00	1.00
Beam Fixed at Both Ends - Uniform Load 	1.50	0.30
Cantilever Beam - Uniform Load 	0.25	2.40
Continuous Beam - Two Equal Spans - Uniform Load on One Span 	1.30	0.92
Continuous Beam - Two Equal Spans Concentrated Load on Both Spans - 	1.00	0.42

EXAMPLE

Problem

Calculate the maximum allowable load and corresponding deflection of a cantilever CCH beam with a uniformly distributed load

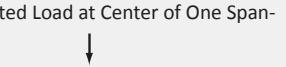
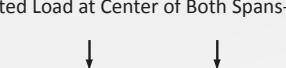


Solution

From beam load chart for CCH, maximum allowable load is q and the corresponding deflection is u . Multiplying by the appropriate factors shown in the chart above

$$\text{LOAD} = q \times \text{load factor}$$

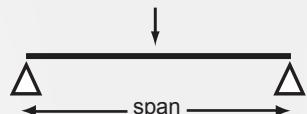
$$\text{DEFLECTION} = u \times \text{deflection factor}$$

Load and Support Condition	Load Factor	Deflection Factor
Simple Beam - Concentrated Load at Center 	1.00	0.80
Simple Beam - Two Equal Concentrated Loads at 1/4 Points 	x 1.00 2	1.10
Beam Fixed at Both Ends - Concentrated Load at Center 	2.00	0.40
Cantilever Beam - Uniform Load 	0.24	3.20
Continuous Beam - Two Equal Spans Concentrated Load at Center of One Span- 	1.42	0.80
Continuous Beam - Two Equal Spans Concentrated Load at Center of Both Spans- 	x 1.34 2	0.50

EXAMPLE

Problem

Calculate the maximum allowable load and corresponding deflection of a simply supported CCH beam with a concentrated load at midspan as shown



Solution

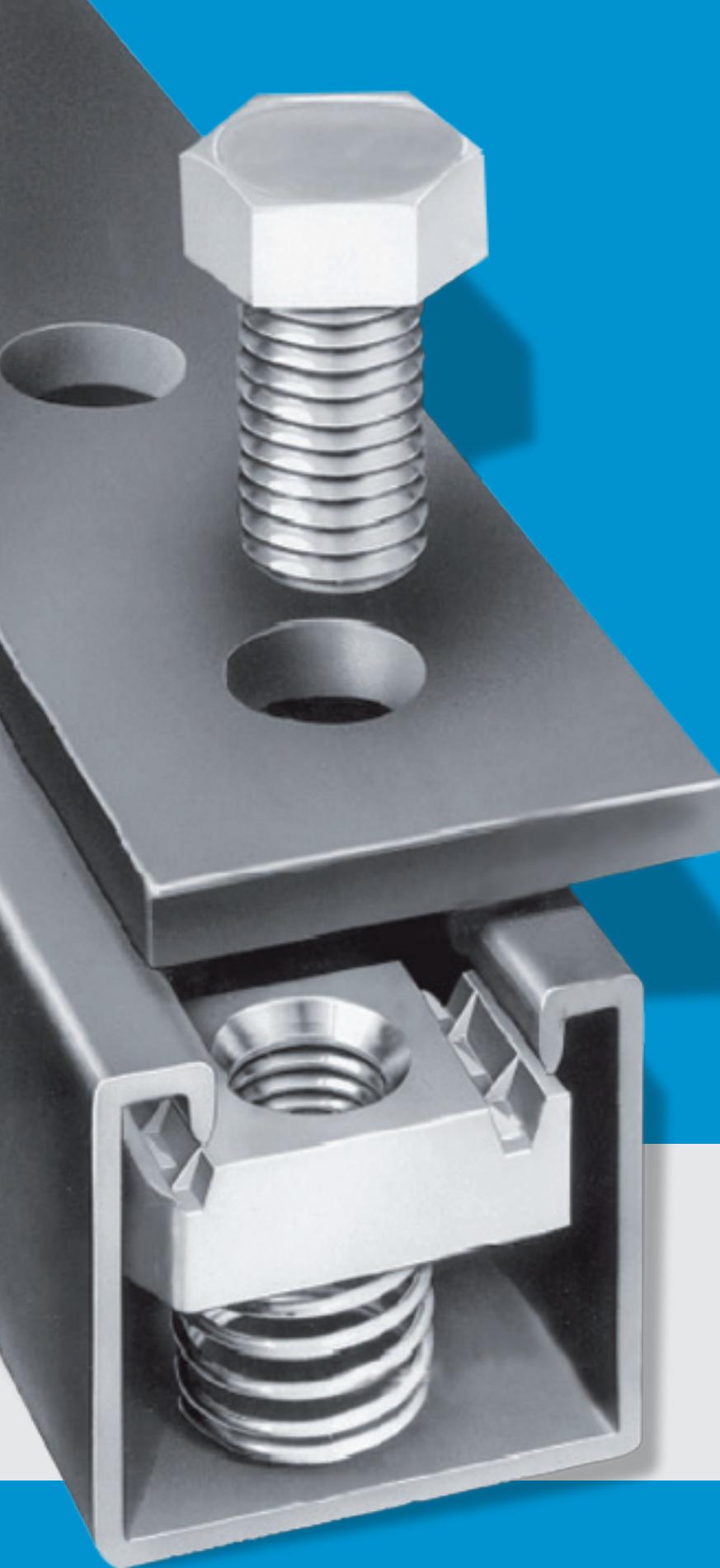
From beam load chart for CCH, maximum allowable load is F and the corresponding deflection is u . Multiplying by the appropriate factors shown in the chart above

$$\text{LOAD} = F \times \text{load factor}$$

$$\text{DEFLECTION} = u \times \text{deflection factor}$$

APPLICATIONS





CHANNELS



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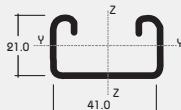
Load table for single beam with uniform (characteristic) Live-Load

This associated data are considered for perforated and non-perforated c-channel types according to DIN 18.800



C-Channel:	41 x 21 x 1.5
Area of Shear (A_z)	0.42 cm^2
Moment of Inertia (I_y)	0.70 cm^4
Moment of Inertia (I_z)	3.34 cm^4
min. Section Modulus (S_y)	0.60 cm^3
Warping Constant (I_w)	17.49 cm^6
Torsional Constant (I_t)	0.01 cm^4
Plastic Moment cap. ($M_{pl,y}$)	0.19 kNm
Self weight (G)	0.97 kg/m

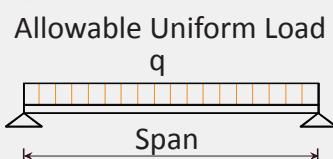
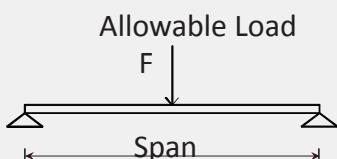
CCH-221



Chosen Material:	40 B = S 235 JRG2
Allowable Bending Stress	21,82 kN/cm^2
Allowable Shear Stress	12,60 kN/cm^2
Modulus of Elasticity	21.000 kN/cm^2

Beam Load Data

Span (L) [cm]	Allowable Load*		Deflection		L / 360	L / 180
	q [kN/m]	F [kN]	U [mm]	[L / X]	q [kN/m]	q [kN/m]
50	2.20	0.60	1.52	330	2.00	2.20
60	1.60	0.50	2.30	260	1.20	1.60
70	1.10	0.39	2.92	240	0.73	1.14
80	0.90	0.36	4.08	200	0.49	0.87
90	0.69	0.31	5.01	180	0.34	0.69
100	0.56	0.28	6.20	160	0.25	0.50
125	0.36	0.23	9.73	130	x	0.26
150	0.25	0.19	14.01	110	x	x
175	0.18	0.16	18.69	90	x	x
200	x	x	x	x	x	x
225	x	x	x	x	x	x
250	x	x	x	x	x	x
275	x	x	x	x	x	x
300	x	x	x	x	x	x

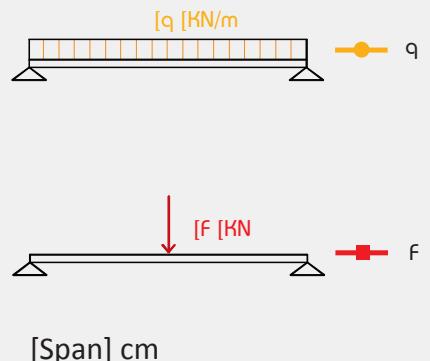
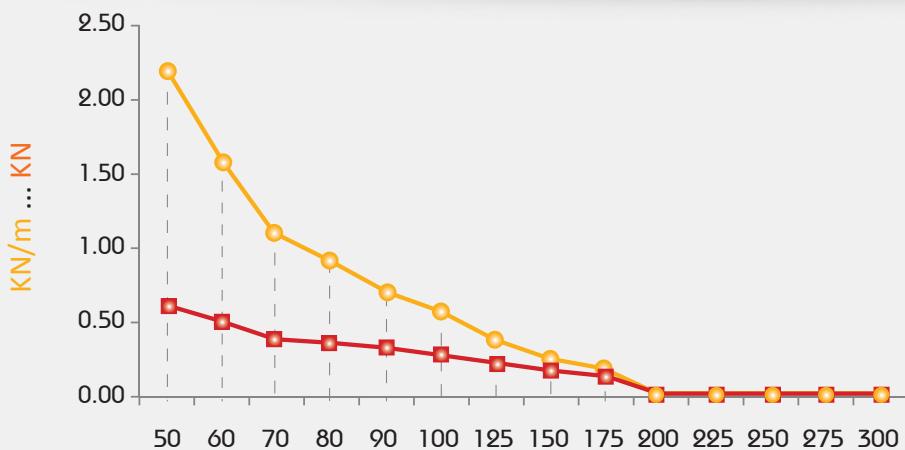


* Given loads are always "allowable characteristic live load"

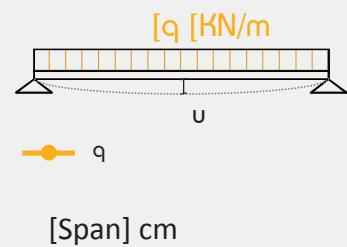
BEAM LOADING GRAPH

CCH-220/221

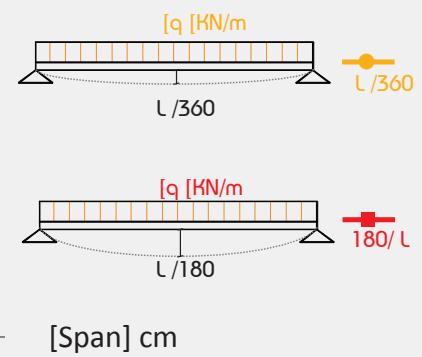
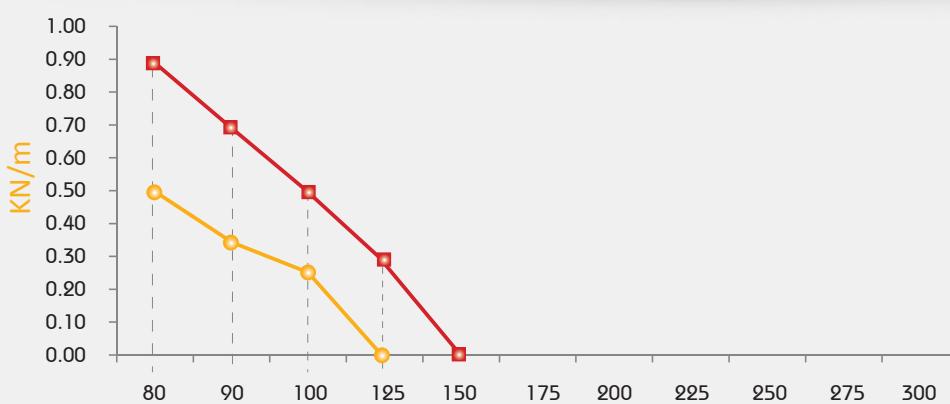
Allowable Loads



Deflection @ Allowable Uniform Load



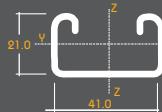
Uniform Load @ Allowable Deflection



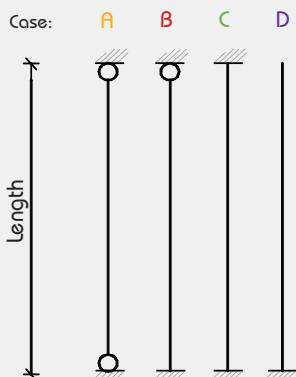
Load table for single beam with uniform (characteristic) Live-Load

This associated data are considered for perforated and non-perforated c-channel types according to DIN 18.800

CCH-220/221



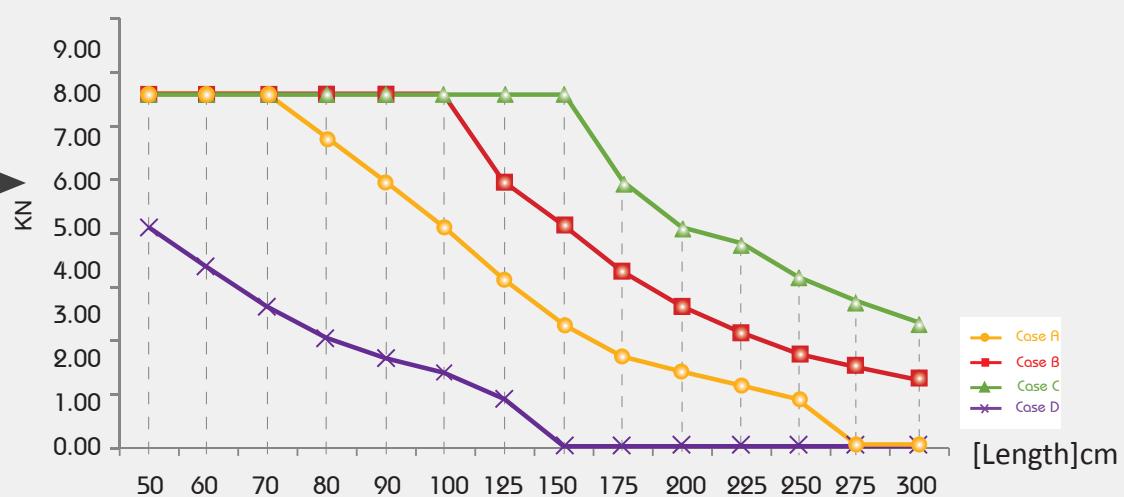
C-Channel:	41 x 21 x 1.5	
Cross Section Area (A)	0.23	cm ²
Moment of Inertia (I_y)	0.70	cm ⁴
Moment of Inertia (I_z)	3.34	cm ⁴
Self weight (G)	0.97	kg/m



Span (L) [cm]	Allowable Central Load** [KN]			
	Case A	Case B	Case C	Case D
50	8.00	8.00	8.00	5.00
60	8.00	8.00	8.00	4.10
70	8.00	8.00	8.00	3.20
80	7.00	8.00	8.00	2.50
90	6.00	8.00	8.00	2.00
100	5.00	8.00	8.00	1.70
125	3.80	6.00	8.00	1.70
150	2.80	5.00	8.00	1.10
175	2.10	4.00	6.00	x
200	1.70	3.20	5.00	x
225	1.40	2.60	4.60	x
250	1.10	2.10	3.80	x
275	x	1.80	3.30	x
300	x	1.50	2.80	x

**Column
Load
Data**

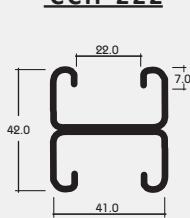
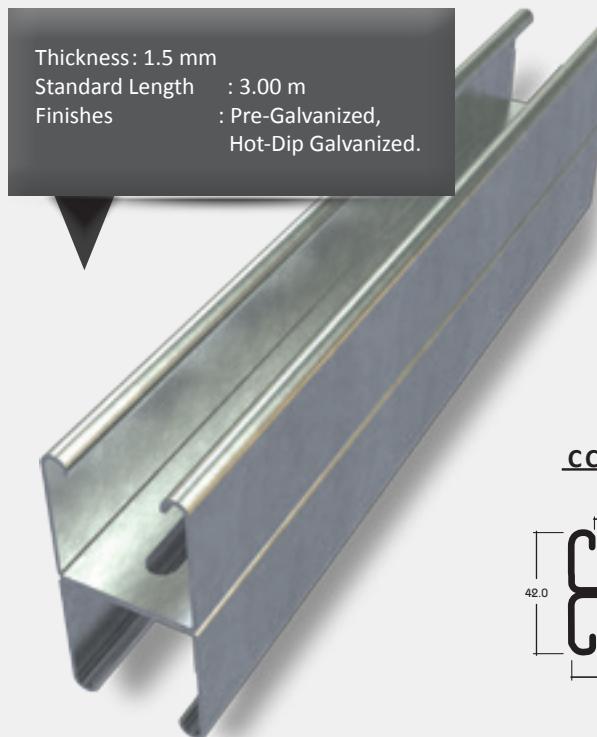
**Allowable
Central
Load



** Given loads are always "allowable characteristic live load"

Load table for single beam with uniform (characteristic) Live-Load

This associated data are considered for perforated and non-perforated c-channel types according to DIN 18.800



C-Channel: 41x 21x1.5 b2b

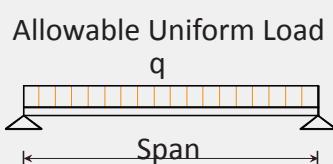
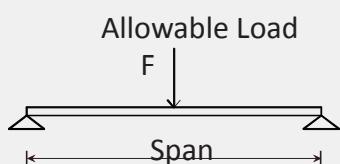
Area of Shear (A_z)	0.54	cm^2
Moment of Inertia (I_y)	3.55	cm^4
Moment of Inertia (I_z)	6.69	cm^4
min. Section Modulus (S_y)	1.69	cm^3
Warping Constant (I_w)	16.33	cm^6
Torsional Constant (I_t)	0.03	cm^4
Plastic Moment cap. ($M_{pl,y}$)	0.50	kNm
Self weight (G)	1.94	kg/m

Chosen Material: 40 B = S 235 JRG2

Allowable Bending Stress	21,82	kN/cm^2
Allowable Shear Stress	12,60	kN/cm^2
Modulus of Elasticity	21.000	kN/cm^2

Beam Load Data

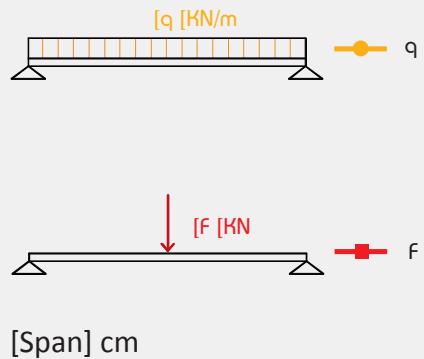
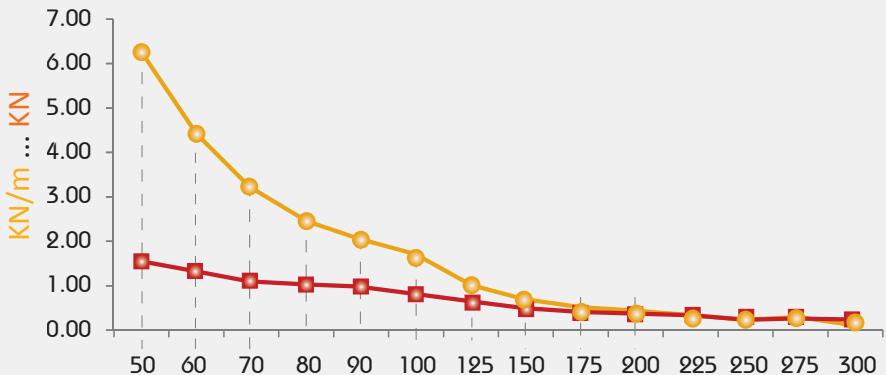
Span (L) [cm]	Allowable Load*		Deflection		Uniform Load* @	
	q [kN/m]	F [kN]	U [mm]	[L/X]	q [kN/m]	q [kN/m]
50	6.30	1.60	0.86	580	6.30	6.30
60	4.40	1.30	1.24	480	4.40	4.40
70	3.20	1.10	1.68	420	3.20	3.20
80	2.50	1.00	2.24	360	2.50	2.50
90	1.90	0.90	2.72	330	1.70	1.90
100	1.60	0.80	3.49	290	1.30	1.60
125	1.00	0.60	5.33	230	0.70	1.00
150	0.70	0.50	7.74	190	0.40	0.70
175	0.51	0.40	10.44	170	0.20	0.50
200	0.39	0.39	13.62	150	x	0.32
225	0.31	0.35	17.35	130	x	0.22
250	0.25	0.31	21.32	120	x	0.16
275	0.21	0.29	26.22	100	x	x
300	0.17	0.26	30.06	100	x	x



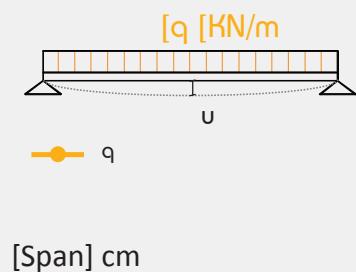
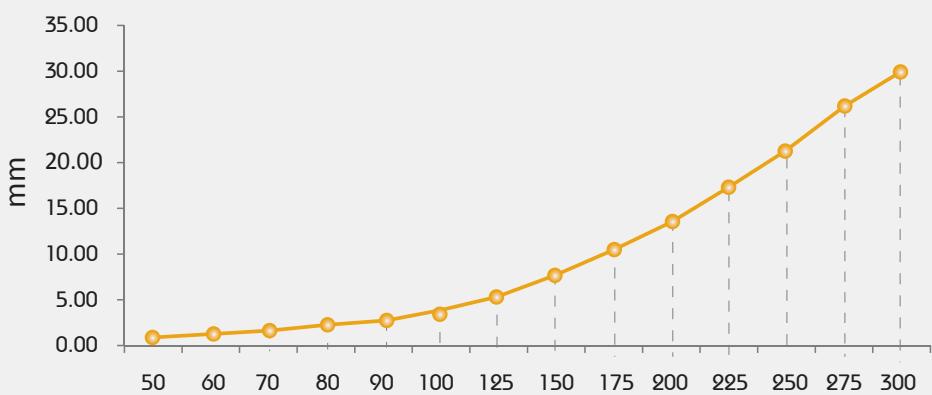
* Given loads are always "allowable characteristic live load"

BEAM LOADING GRAPH CCH-222

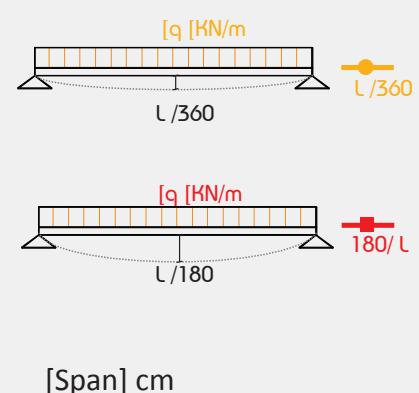
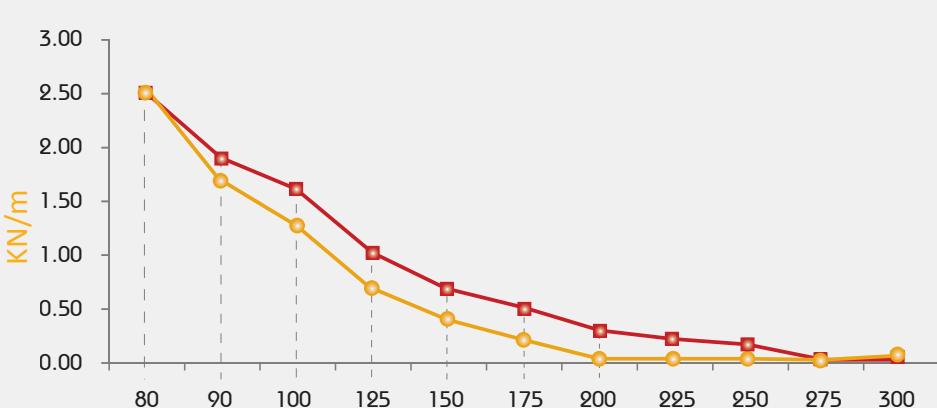
Allowable Loads



Deflection @ Allowable Uniform Load



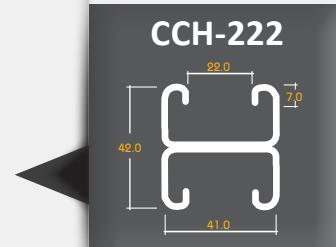
Uniform Load @ Allowable Deflection



Load table for single beam with uniform (characteristic) Live-Load

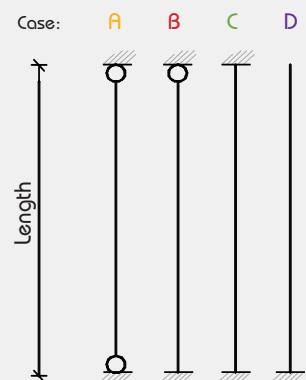
This associated data are considered for perforated and non-perforated c-channel types according to DIN 18.800

C-Channel: 41 x 21 x 1.5 b2b		
Cross Section Area (A)	2.47	cm ²
Moment of Inertia (I_y)	3.55	cm ⁴
Moment of Inertia (I_z)	6.69	cm ⁴
Self weight (G)	1.94	kg/m



Column Load Data

Span (L) [cm]	Allowable Central Load** [KN]			
	Case A	Case B	Case C	Case D
50	16.00	16.00	16.00	16.00
60	16.00	16.00	16.00	16.00
70	16.00	16.00	16.00	13.00
80	16.00	16.00	16.00	10.00
90	16.00	16.00	16.00	9.00
100	16.00	16.00	16.00	7.00
125	15.00	16.00	16.00	5.00
150	11.00	16.00	16.00	3.70
175	9.00	15.00	16.00	2.80
200	7.00	13.00	16.00	2.20
225	6.00	11.00	16.00	x
250	5.00	9.00	15.00	x
275	4.40	8.00	13.00	x
300	3.70	7.00	11.00	x



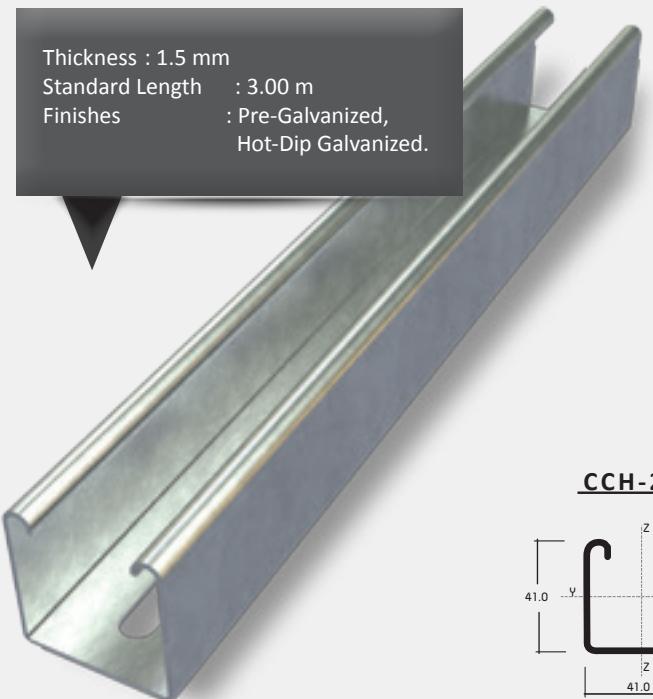
Allowable Central Load**



** Given loads are always "allowable characteristic live load"

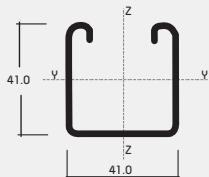
Load table for single beam with uniform (characteristic) Live-Load

This associated data are considered for perforated and non-perforated c-channel types according to DIN 18.800



C-Channel:	41x41x1.5	
Area of Shear (A_z)	1.02	cm ²
Moment of Inertia (I_y)	3.87	cm ⁴
Moment of Inertia (I_z)	5.68	cm ⁴
min. Section Modulus (S_y)	1.76	cm ³
Warping Constant (I_w)	114.17	cm ⁶
Torsional Constant (I_T)	0.02	cm ⁴
Plastic Moment cap. ($M_{pl,y}$)	0.52	kNm
Self weight (G)	1.44	kg/m

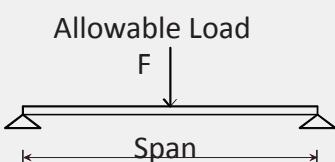
CCH-240



Chosen Material:	40 B = S 235 JRG2	
Allowable Bending Stress	21,82	kN/cm ²
Allowable Shear Stress	12,60	kN/cm ²
Modulus of Elasticity	21.000	kN/cm ²

Beam Load Data

Span (L) [cm]	Allowable Load*		Deflection		Uniform Load* @	
	q [kN/m]	F [kN]	U [mm]	[L / X]	q [kN/m]	q [kN/m]
50	6.60	1.70	0.83	610	6.60	6.60
60	4.60	1.40	1.19	500	4.60	4.60
70	3.30	1.20	1.59	440	3.30	3.30
80	2.60	1.00	2.13	380	2.60	2.60
90	2.00	0.90	2.63	340	1.90	2.00
100	1.60	0.80	3.20	310	1.40	1.60
125	1.00	0.60	4.89	260	0.70	1.00
150	0.73	0.50	7.40	200	0.40	0.70
175	0.53	0.50	9.96	180	0.30	0.50
200	0.41	0.40	13.14	150	0.20	0.30
225	0.32	0.36	16.42	140	x	0.24
250	0.26	0.33	20.34	120	x	0.18
275	0.22	0.30	25.20	110	x	x
300	0.18	0.27	29.20	100	x	x

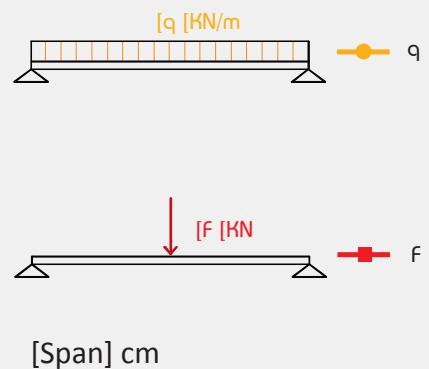
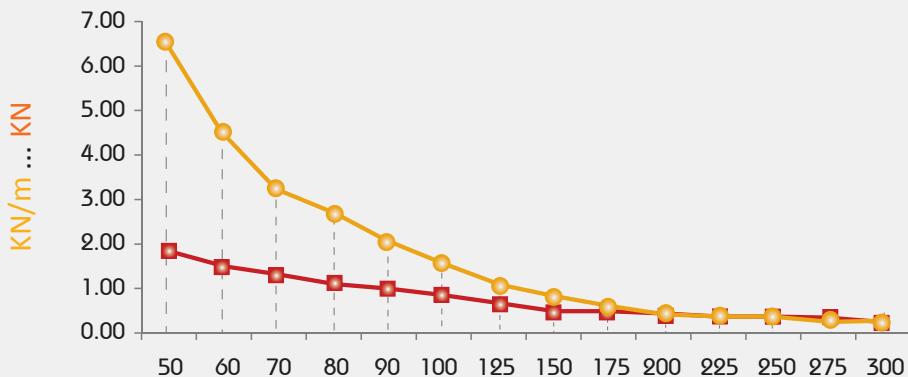


* Given loads are always "allowable characteristic live load"

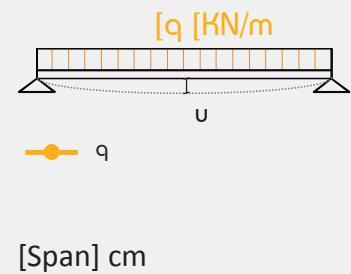
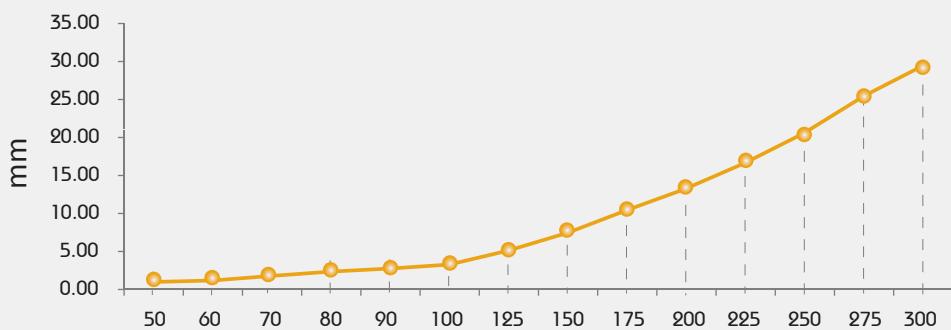
BEAM LOADING GRAPH

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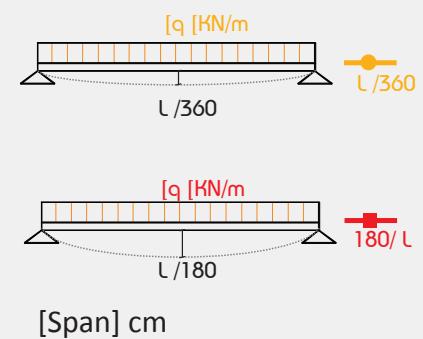
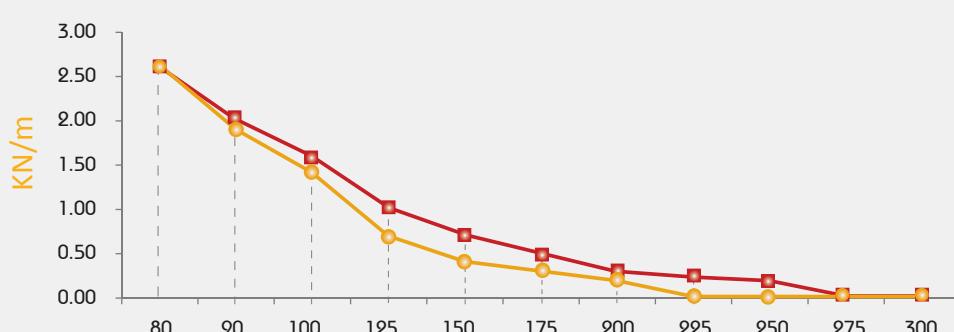
Allowable Loads



Deflection @ Allowable Uniform Load

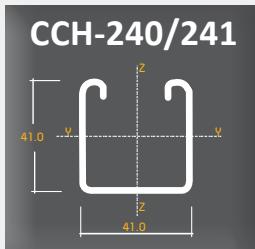


Uniform Load @ Allowable Deflection

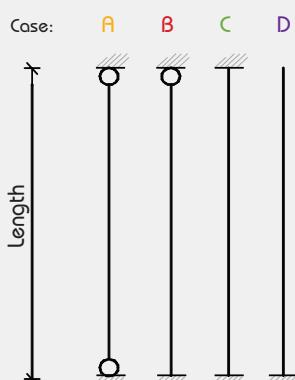


Load table for single beam with uniform (characteristic) Live-Load

This associated data are considered for perforated and non-perforated c-channel types according to DIN 18.800



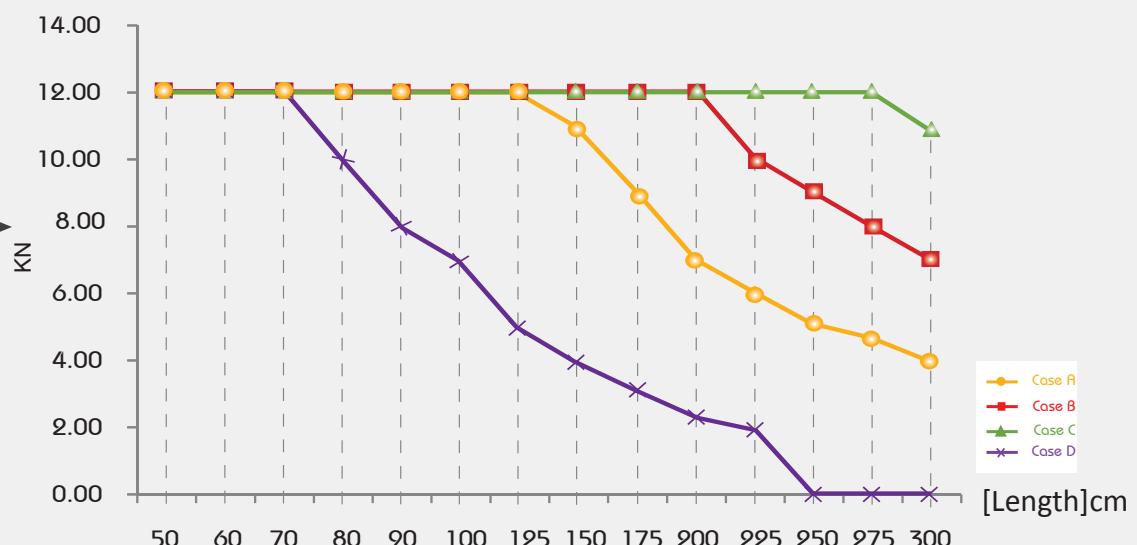
C-Channel: 41 x 41 x 1.5	
Cross Section Area (A)	1.83 cm ²
Moment of Inertia (I_y)	3.87 cm ⁴
Moment of Inertia (I_z)	5.68 cm ⁴
Self weight (G)	1.44 kg/m



Span (L) [cm]	Allowable Central Load** [KN]			
	Case A	Case B	Case C	Case D
50	12.00	12.00	12.00	12.00
60	12.00	12.00	12.00	12.00
70	12.00	12.00	12.00	12.00
80	12.00	12.00	12.00	10.00
90	12.00	12.00	12.00	8.00
100	12.00	12.00	12.00	7.00
125	12.00	12.00	12.00	5.00
150	11.00	12.00	12.00	3.90
175	9.00	12.00	12.00	3.00
200	7.00	12.00	12.00	2.30
225	6.00	10.00	12.00	1.90
250	5.00	9.00	12.00	x
275	4.60	8.00	12.00	x
300	3.90	7.00	11.00	x

Column
Load
Data

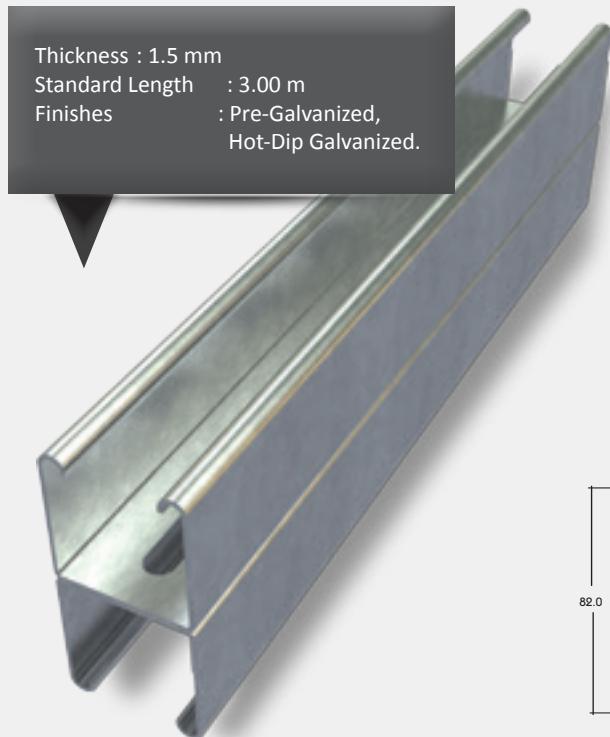
Allowable
Central
Load**



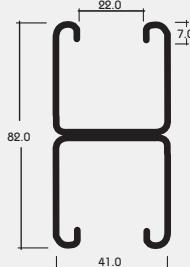
** Given loads are always "allowable characteristic live load"

Load table for single beam with uniform (characteristic) Live-Load

This associated data are considered for perforated and non-perforated c-channel types according to DIN 18.800



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C-Channel: 41x 41x1.5 b2b

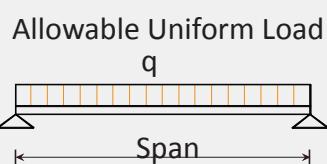
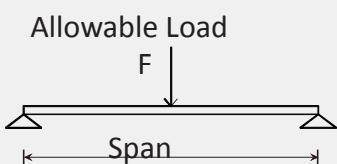
Area of Shear (A_s)	1.43	cm ²
Moment of Inertia (I_y)	21.11	cm ⁴
Moment of Inertia (I_z)	11.37	cm ⁴
min. Section Modulus (S_y)	5.15	cm ³
Warping Constant (I_w)	95.85	cm ⁶
Torsional Constant (I_T)	0.04	cm ⁴
Plastic Moment cap. ($M_{pl,y}$)	1.53	kNm
Self weight (G)	2.88	kg/m

Chosen Material: 40 B = S 235 JRG2

Allowable Bending Stress	21,82	kN/cm ²
Allowable Shear Stress	12,60	kN/cm ²
Modulus of Elasticity	21.000	kN/cm ²

Beam Load Data

Span (L) [cm]	Allowable Load*		Deflection		Uniform Load* @	
	q [kN/m]	F [kN]	U [mm]	[L / X]	q [kN/m]	q [kN/m]
50	19.20	4.80	0.44	1.130	19.20	19.20
60	13.30	4.00	0.63	950	13.30	13.30
70	9.80	3.40	0.86	810	9.80	9.80
80	7.50	3.00	1.13	710	7.50	7.50
90	5.90	2.70	1.42	630	5.90	5.90
100	4.80	2.40	1.76	570	4.80	4.80
125	3.10	1.90	2.78	450	3.10	3.10
150	2.10	1.60	3.90	380	2.10	2.10
175	1.60	1.40	5.51	320	1.40	1.60
200	1.10	1.10	6.46	310	0.90	1.10
225	0.80	0.90	7.53	300	0.70	0.80
250	0.58	0.70	8.32	300	0.50	0.60
275	0.44	0.60	9.24	300	0.40	0.40
300	0.34	0.50	10.11	300	0.30	0.30

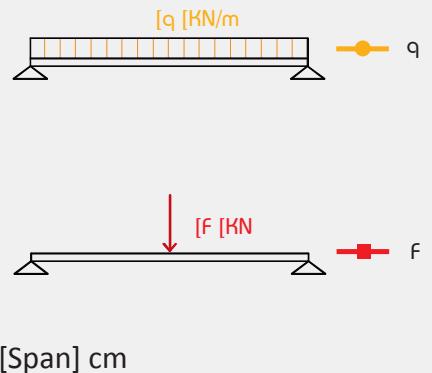


* Given loads are always "allowable characteristic live load"

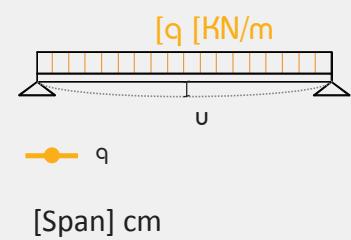
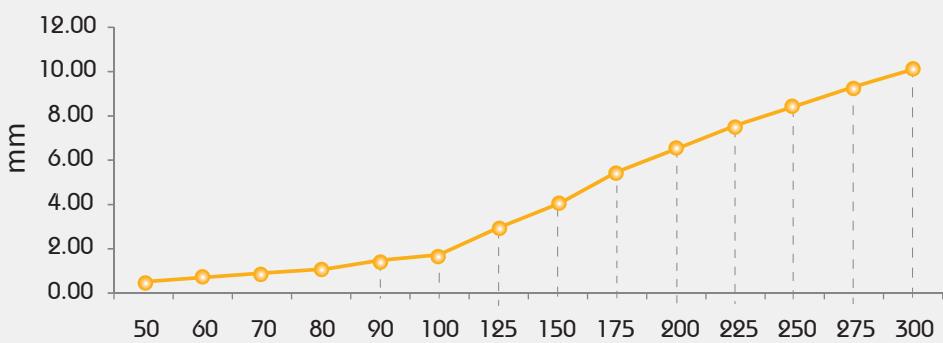
BEAM LOADING GRAPH

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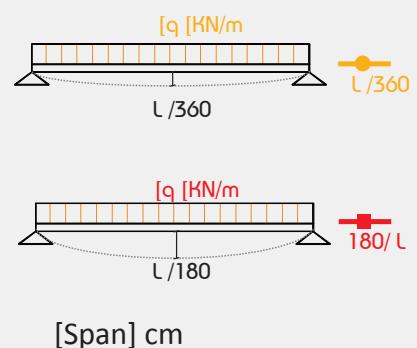
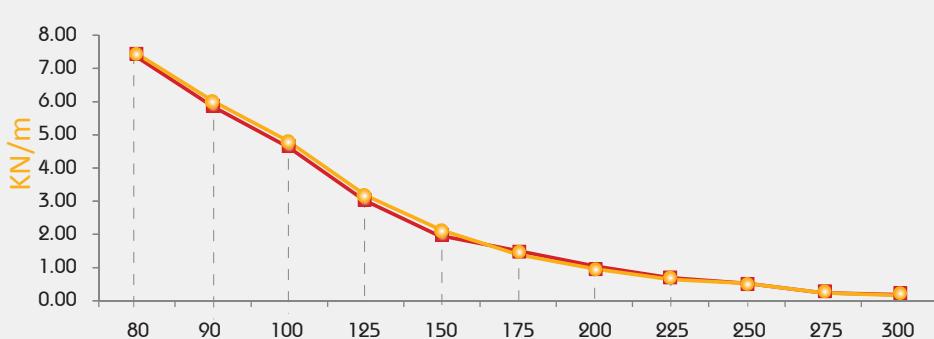
Allowable Loads



Deflection @ Allowable Uniform Load



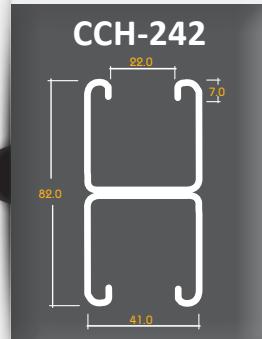
Uniform Load @ Allowable Deflection



Load table for single beam with uniform (characteristic) Live-Load

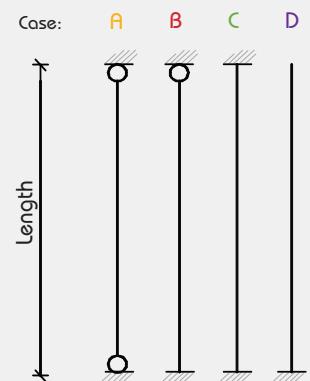
This associated data are considered for perforated and non-perforated c-channel types according to DIN 18.800

C-Channel:		
	41 x 41 x 1.5 b2b	
Cross Section Area (A)	3.67	cm ²
Moment of Inertia (I_y)	21.11	cm ⁴
Moment of Inertia (I_z)	11.37	cm ⁴
Self weight (G)	2.88	kg/m

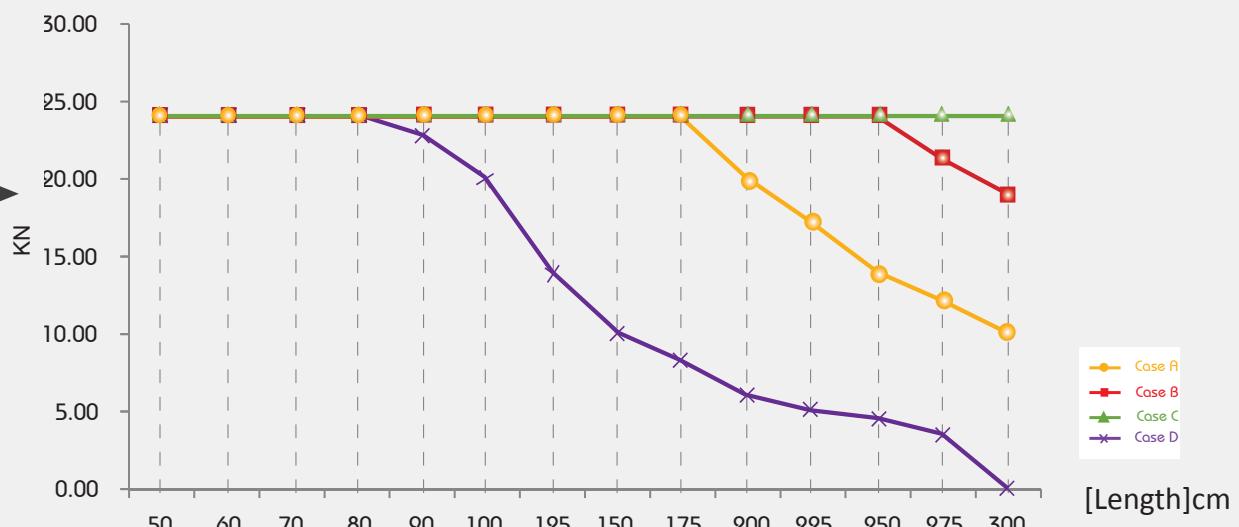


Column Load Data

Span (L) [cm]	Allowable Central Load** [KN]			
	Case A	Case B	Case C	Case D
50	24.00	24.00	24.00	24.00
60	24.00	24.00	24.00	24.00
70	24.00	24.00	24.00	24.00
80	24.00	24.00	24.00	24.00
90	24.00	24.00	24.00	23.00
100	24.00	24.00	24.00	20.00
125	24.00	24.00	24.00	14.00
150	24.00	24.00	24.00	10.00
175	24.00	24.00	24.00	8.00
200	20.00	24.00	24.00	6.00
225	17.00	24.00	24.00	5.00
250	14.00	24.00	24.00	4.40
275	12.00	21.00	24.00	3.70
300	10.00	19.00	24.00	x



Allowable Central **Load



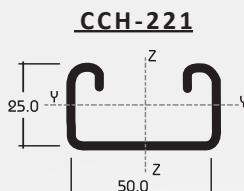
** Given loads are always "allowable characteristic live load"

Load table for single beam with uniform (characteristic) Live-Load

This associated data are considered for perforated and non-perforated c-channel types according to DIN 18.800



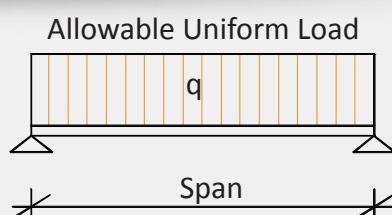
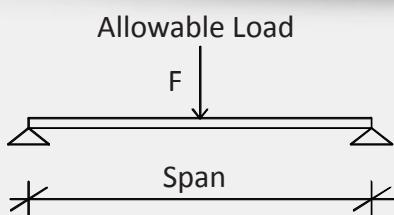
C-Channel:	50 x 25 x 1.5
Area of Shear (A_z)	0.52 cm^2
Moment of Inertia (I_y)	1.19 cm^4
Moment of Inertia (I_z)	6.13 cm^4
min. Section Modulus (S_y)	0.83 cm^3
Warping Constant (I_w)	40.86 cm^6
Torsional Constant (I_t)	0.01 cm^4
Plastic Moment cap. ($M_{pl,y}$)	0.26 kNm
Self weight (G)	1.20 kg/m



Chosen Material:	S 235 JRG2
Allowable Bending Stress	21,82 kN/cm^2
Allowable Shear Stress	12,60 kN/cm^2
Modulus of Elasticity	21.000 kN/cm^2

Beam Load Data

Span (L) [cm]	Allowable Load*		Deflection		Uniform Load* @	
	q [kN/m]	F [kN]	U [mm]	[L / X]	q [kN/m]	q [kN/m]
30	8.60	1.30	0.40	750	8.60	8.60
40	4.80	1.00	0.71	570	4.80	4.80
50	3.10	0.78	1.11	450	3.09	3.09
60	2.10	0.63	1.57	380	1.97	2.15
70	1.60	0.56	2.22	320	1.24	1.58
80	1.20	0.48	2.85	280	0.83	1.21
90	1.00	0.45	3.81	240	0.59	0.95
100	0.77	0.39	4.48	220	0.43	0.77
125	0.49	0.31	7.02	180	0.22	0.44
150	0.34	0.26	10.21	150	x	0.25
175	0.25	0.22	14.08	120	x	x
200	0.19	0.19	18.52	110	x	x
225	x	x	x	x	x	x
250	x	x	x	x	x	x
275	x	x	x	x	x	x
300	x	x	x	x	x	x

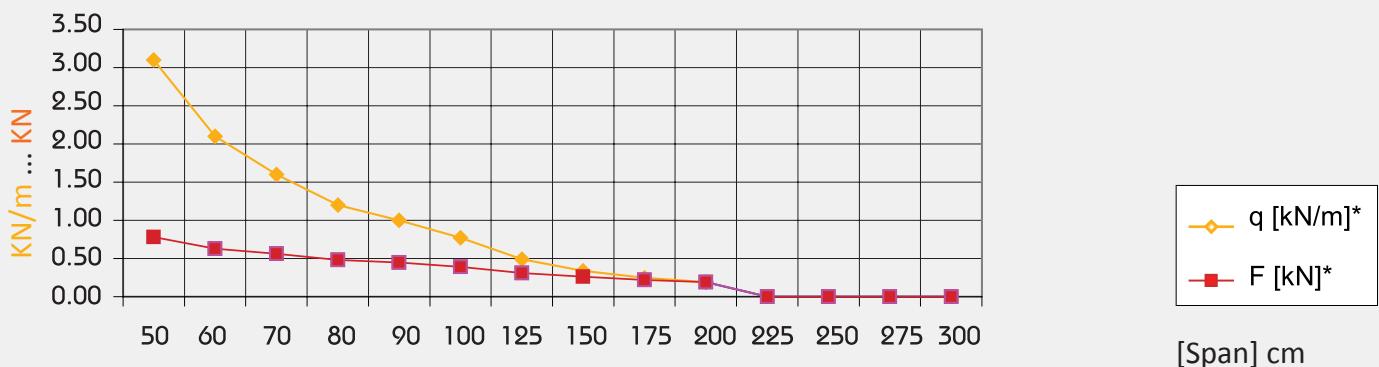


* Given loads are always "allowable characteristic live load"

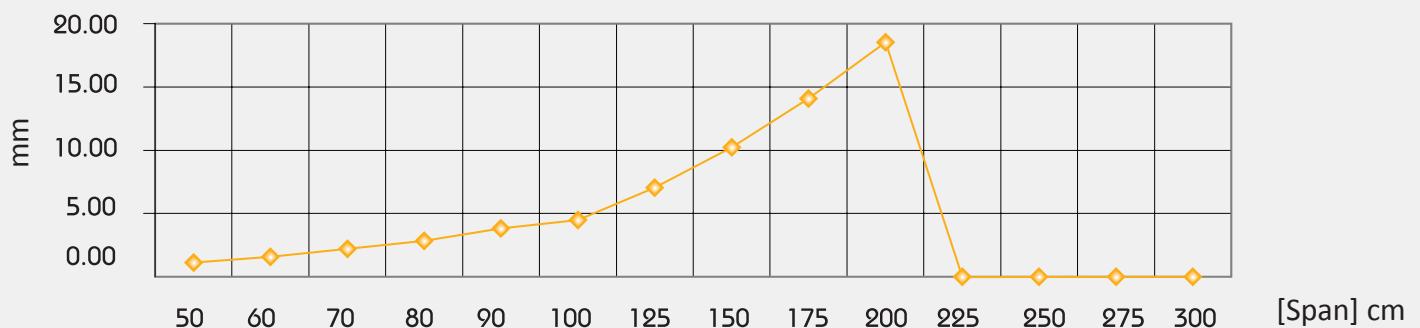
BEAM LOADING GRAPH

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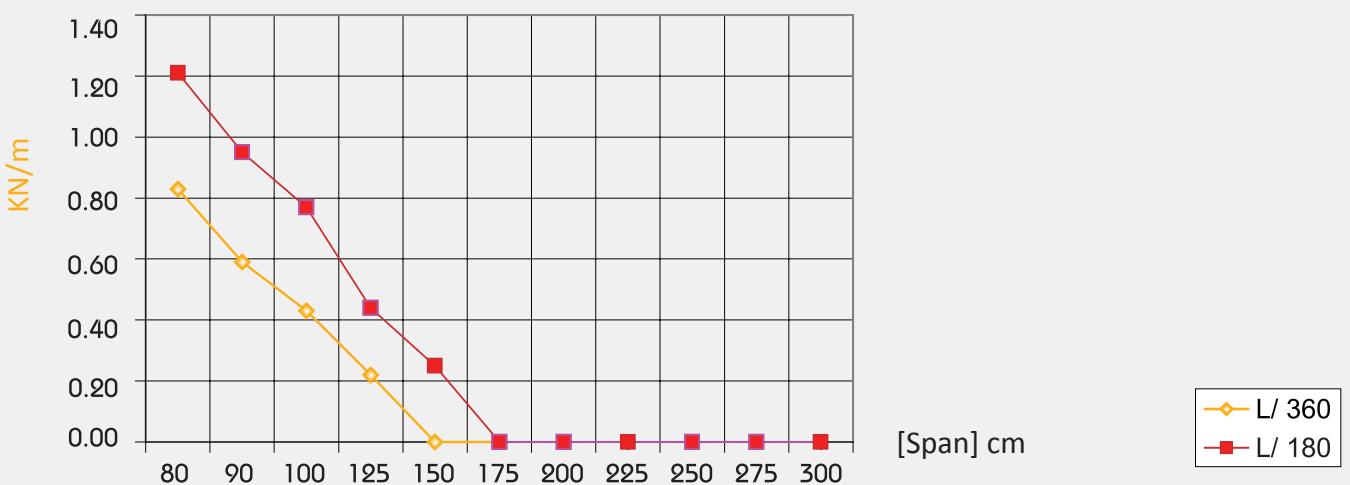
Allowable Loads



Deflection @ Allowable Uniform Load

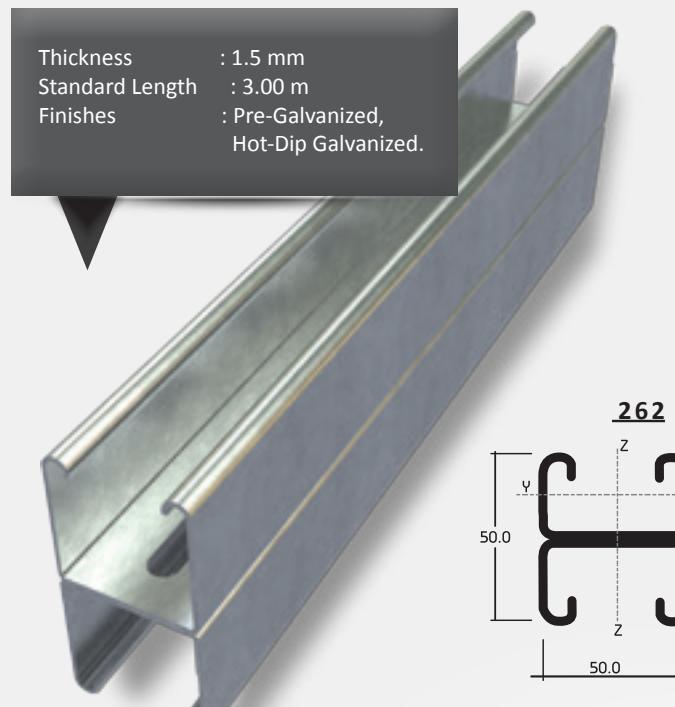


Uniform Load @ Allowable Deflection



Load table for single beam with uniform (characteristic) Live-Load

This associated data are considered for perforated and non-perforated c-channel types according to DIN 18.800

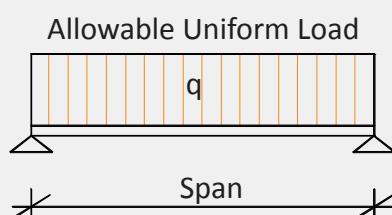
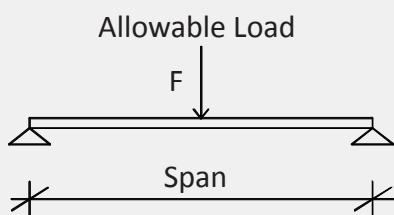


C-Channel:	50 x 25 x 1.5 b2b	
Area of Shear (A_z)	1.05	cm ²
Moment of Inertia (I_y)	5.63	cm ⁴
Moment of Inertia (I_z)	12.27	cm ⁴
min. Section Modulus (S_y)	2.25	cm ³
Warping Constant (I_w)	25.85	cm ⁶
Torsional Constant (I_t)	0.03	cm ⁴
Plastic Moment cap. ($M_{pl,y}$)	0.67	kNm
Self weight (G)	2.30	kg/m

Chosen Material:	S 235 JRG2	
Allowable Bending Stress	21,82	kN/cm ²
Allowable Shear Stress	12,60	kN/cm ²
Modulus of Elasticity	21.000	kN/cm ²

Beam Load Data

Span (L) [cm]	Allowable Load*		Deflection		Uniform Load* @	
	q [kN/m]	F [kN]	U [mm]	[L / X]	q [kN/m]	q [kN/m]
50	8,40	2,10	0,64	780	8,40	8,40
60	5,80	1,70	0,91	660	5,80	5,80
70	4,30	1,50	1,26	560	4,30	4,30
80	3,30	1,30	1,65	490	3,30	3,30
90	2,60	1,20	2,08	430	2,60	2,60
100	2,10	1,10	2,57	390	2,00	2,10
125	1,30	0,80	3,91	320	1,00	1,30
150	0,90	0,68	5,66	260	0,60	0,93
175	0,68	0,60	7,99	220	0,38	0,68
200	0,52	0,52	10,53	190	0,25	0,50
225	0,41	0,46	13,44	170	0,18	0,35
250	0,34	0,43	17,18	150	x	0,26
275	0,28	0,39	20,99	130	x	0,19
300	0,23	0,35	24,83	120	x	x

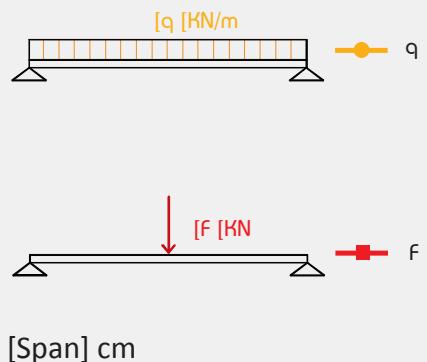
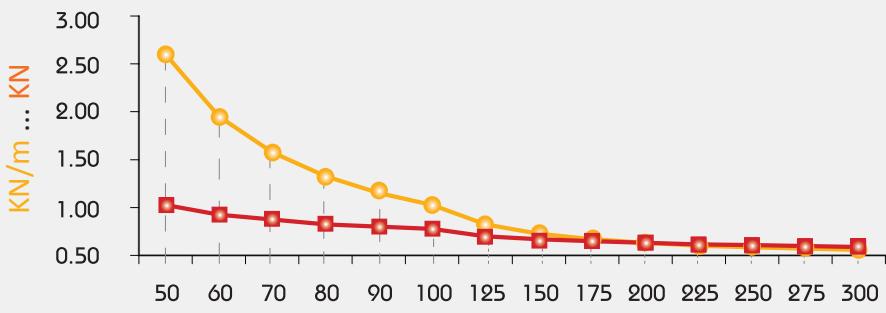


* Given loads are always "allowable characteristic live load"

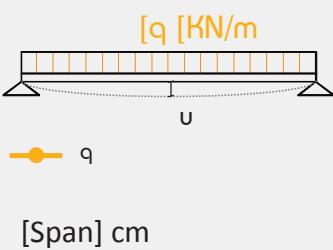
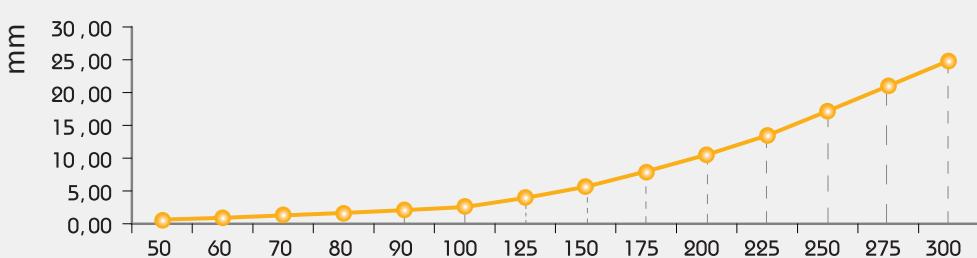
BEAM LOADING GRAPH

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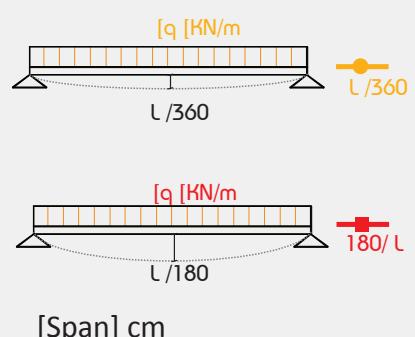
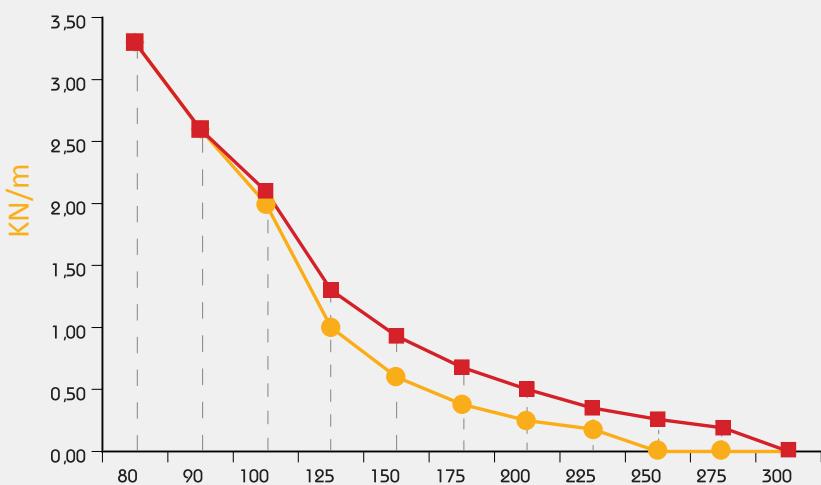
Allowable Loads



Deflection @ Allowable Uniform Load



Uniform Load @ Allowable Deflection



[Span] cm

Load table for single beam with uniform (characteristic) Live-Load

This associated data are considered for perforated and non-perforated c-channel types according to DIN 18.800



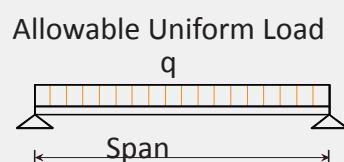
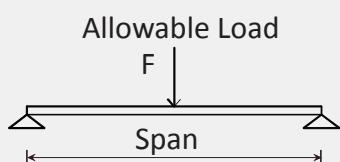
Thickness : 2.0 mm
Standard Length : 3.00 m
Finishes : Pre-Galvanized,
Hot-Dip Galvanized.

C-Channel:	41 x 21 x 2.0
Area of Shear (A_z)	0.55 cm ²
Moment of Inertia (I_y)	0.88 cm ⁴
Moment of Inertia (I_z)	4.25 cm ⁴
min. Section Modulus (S_y)	0.75 cm ³
Warping Constant (I_w)	21.34 cm ⁶
Torsional Constant (I_T)	0.02 cm ⁴
Plastic Moment cap. ($M_{pl,y}$)	0.24 kNm
Self weight (G)	1.27 kg/m

Chosen Material:	40 B = S 235 JRG2
Allowable Bending Stress	21,82 kN/cm ²
Allowable Shear Stress	12,60 kN/cm ²
Modulus of Elasticity	21.000 kN/cm ²

Beam Load Data

Span (L)	Allowable Load*		Deflection		Uniform Load* @	
	[cm]	q [kN/m]	F [kN]	U [mm]	[L / X]	q [kN/m]
50	2.80	0.70	0.154	320	2.50	2.80
60	1.90	0.60	0.217	280	1.50	1.90
70	1.40	0.50	0.296	240	0.90	1.40
80	1.10	0.40	0.397	200	0.60	1.10
90	0.90	0.41	0.520	170	0.43	0.86
100	0.70	0.35	0.617	160	0.32	0.63
125	0.45	0.28	0.968	130	0.16	0.32
150	0.31	0.23	13.82	110	x	0.19
175	0.23	0.20	19.00	90	x	x
200	0.17	0.17	23.96	80	x	x
225	x	x	x	x	x	x
250	x	x	x	x	x	x
275	x	x	x	x	x	x
300	x	x	x	x	x	x

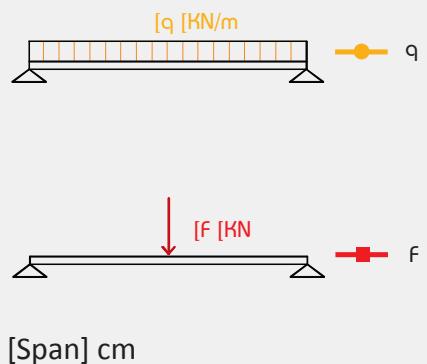
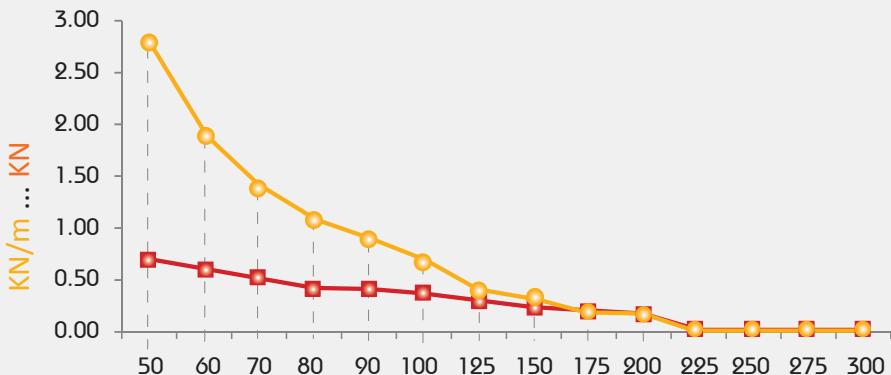


* Given loads are always "allowable characteristic live load"

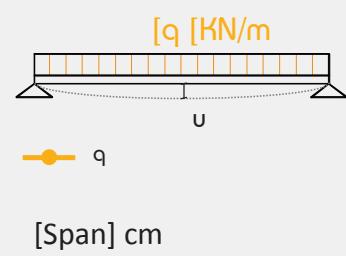
BEAM LOADING GRAPH

CCH-320/321

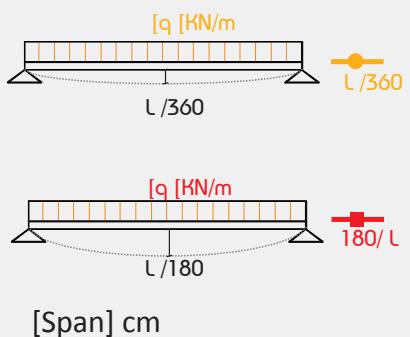
Allowable Loads



Deflection @ Allowable Uniform Load

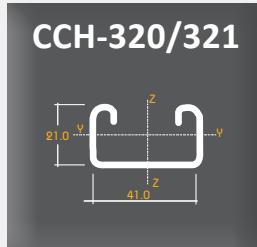


Uniform Load @ Allowable Deflection

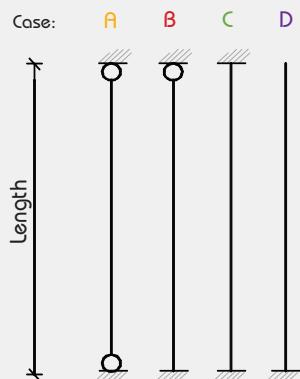


Load table for single beam with uniform (characteristic) Live-Load

This associated data are considered for perforated and non-perforated c-channel types according to DIN 18.800



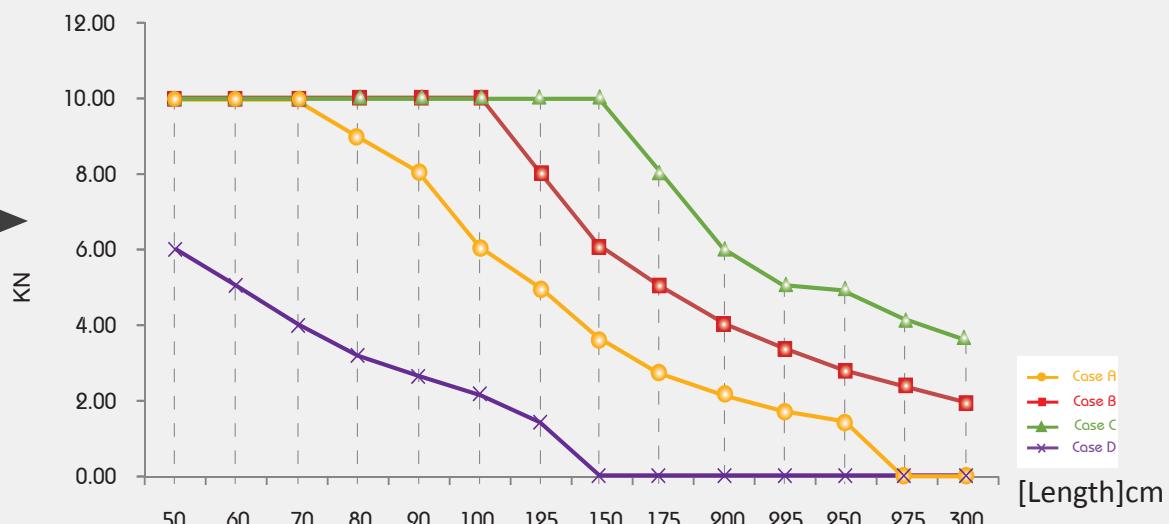
C-Channel:		41 x 21 x 2.0
Cross Section Area (A)	1.62	cm ²
Moment of Inertia (I_y)	0.88	cm ⁴
Moment of Inertia (I_z)	4.25	cm ⁴
Self weight (G)	1.27	kg/m



Span (L) [cm]	Allowable Central Load** [KN]			
	Case A	Case B	Case C	Case D
50	10.00	10.00	10.00	6.00
60	10.00	10.00	10.00	5.00
70	10.00	10.00	10.00	4.00
80	9.00	10.00	10.00	3.20
90	8.00	10.00	10.00	2.60
100	6.00	10.00	10.00	2.10
125	4.90	8.00	10.00	1.40
150	3.60	6.00	10.00	x
175	2.70	5.00	8.00	x
200	2.10	4.00	6.00	x
225	1.70	3.30	5.00	x
250	1.40	2.70	4.90	x
275	x	2.30	4.10	x
300	x	1.90	3.60	x

Column
Load
Data

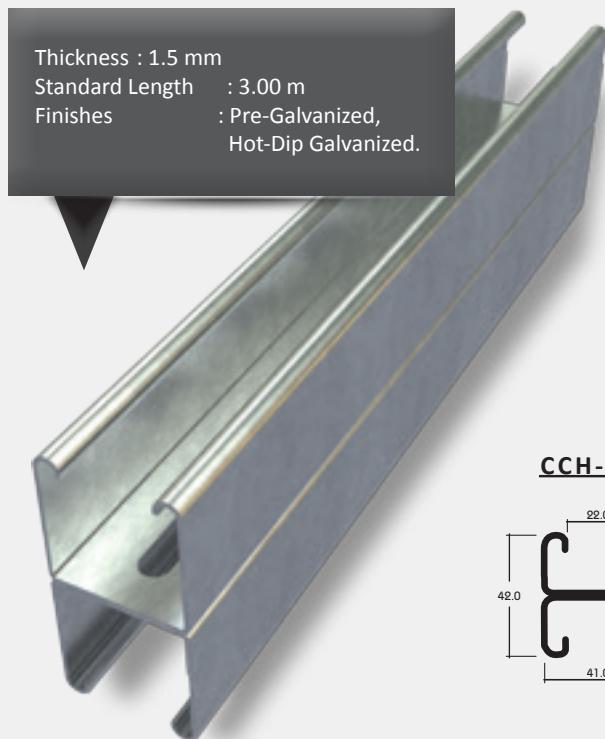
Allowable
Central
Load**



** Given loads are always "allowable characteristic live load"

Load table for single beam with uniform (characteristic) Live-Load

This associated data are considered for perforated and non-perforated c-channel types according to DIN 18.800

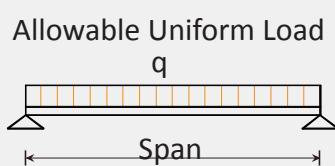
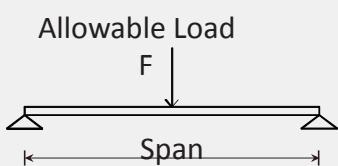


C-Channel:	41x21x2.0 b2b
Area of Shear (A_z)	0.71 cm ²
Moment of Inertia (I_y)	4.60 cm ⁴
Moment of Inertia (I_z)	8.51 cm ⁴
min. Section Modulus (S_y)	2.19 cm ³
Warping Constant (I_w)	19.76 cm ⁶
Torsional Constant (I_t)	0.06 cm ⁴
Plastic Moment cap. ($M_{pl,y}$)	0.66 kNm
Self weight (G)	2.54 kg/m

Chosen Material:	40 B = S 235 JRG2
Allowable Bending Stress	21,82 kN/cm ²
Allowable Shear Stress	12,60 kN/cm ²
Modulus of Elasticity	21.000 kN/cm ²

Beam Load Data

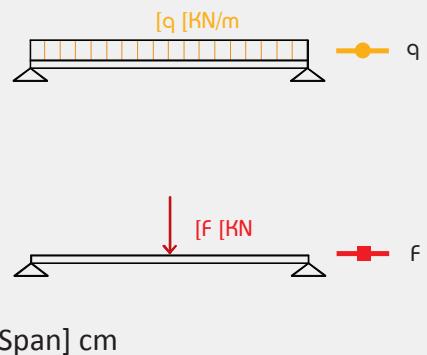
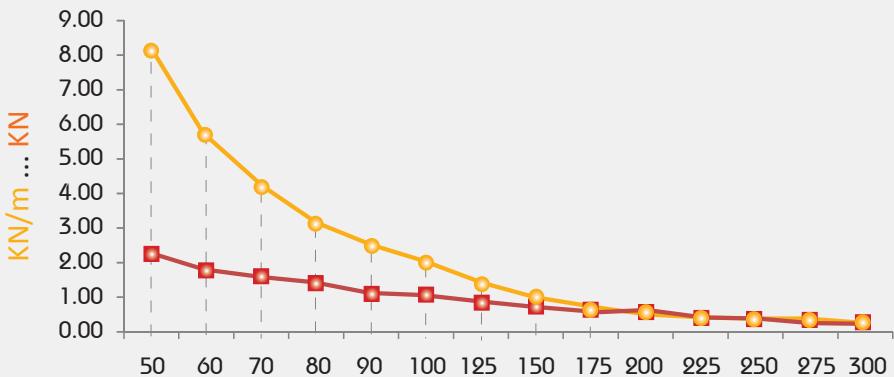
Span (L) [cm]	Allowable Load*		Deflection		Uniform Load* @	
	q [kN/m]	F [kN]	U [mm]	[L / X]	q [kN/m]	q [kN/m]
50	8.20	2.10	0.86	580	8.20	8.20
60	5.70	1.70	1.24	480	5.70	5.70
70	4.20	1.50	1.70	410	4.20	4.20
80	3.20	1.30	2.21	360	3.20	3.20
90	2.50	1.10	2.76	330	2.30	2.50
100	2.00	1.00	3.37	300	1.60	2.00
125	1.30	0.80	5.35	230	0.80	1.30
150	0.90	0.70	7.68	200	0.50	0.90
175	0.67	0.60	10.59	170	0.30	0.60
200	0.51	0.50	13.75	150	0.20	0.40
225	0.40	0.50	17.27	130	x	0.30
250	0.33	0.40	21.72	120	x	0.20
275	0.27	0.37	26.02	110	x	x
300	0.23	0.35	31.39	100	x	x



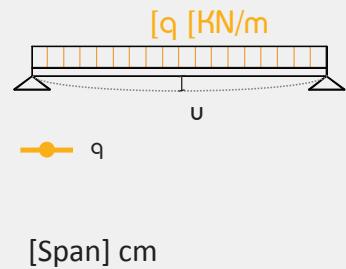
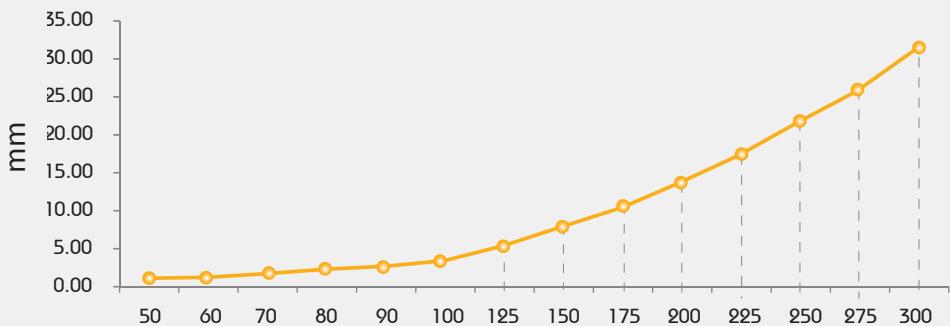
* Given loads are always "allowable characteristic live load"

BEAM LOADING GRAPH CCH-322

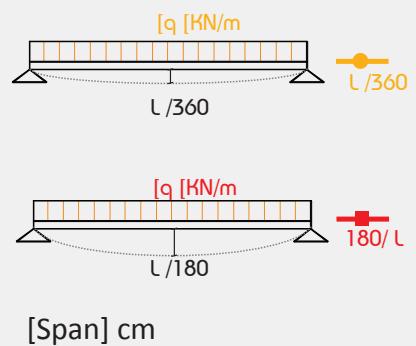
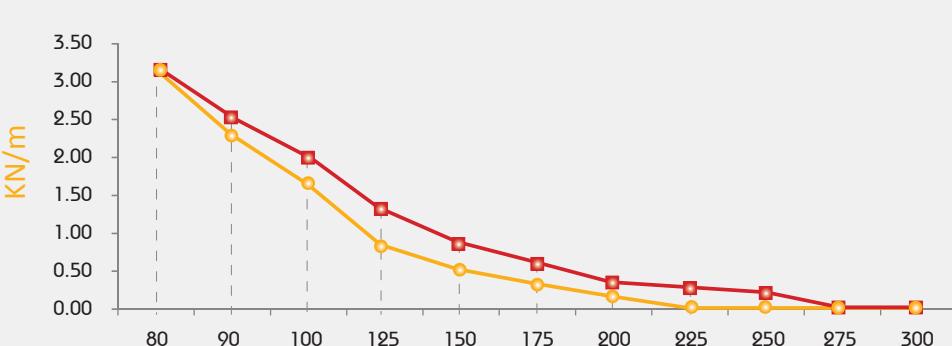
Allowable Loads



Deflection @ Allowable Uniform Load



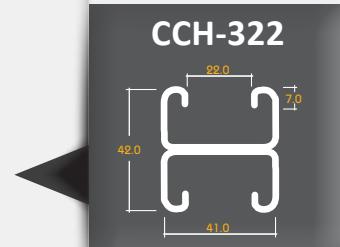
Uniform Load @ Allowable Deflection



Load table for single beam with uniform (characteristic) Live-Load

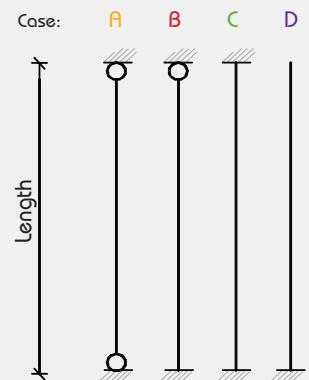
This associated data are considered for perforated and non-perforated c-channel types according to DIN 18.800

C-Channel:		41 x 21 x 2.0 b2b	
Cross Section Area (A)	3.67	cm ²	
Moment of Inertia (I_y)	21.11	cm ⁴	
Moment of Inertia (I_z)	11.37	cm ⁴	
Self weight (G)	2.88	kg/m	

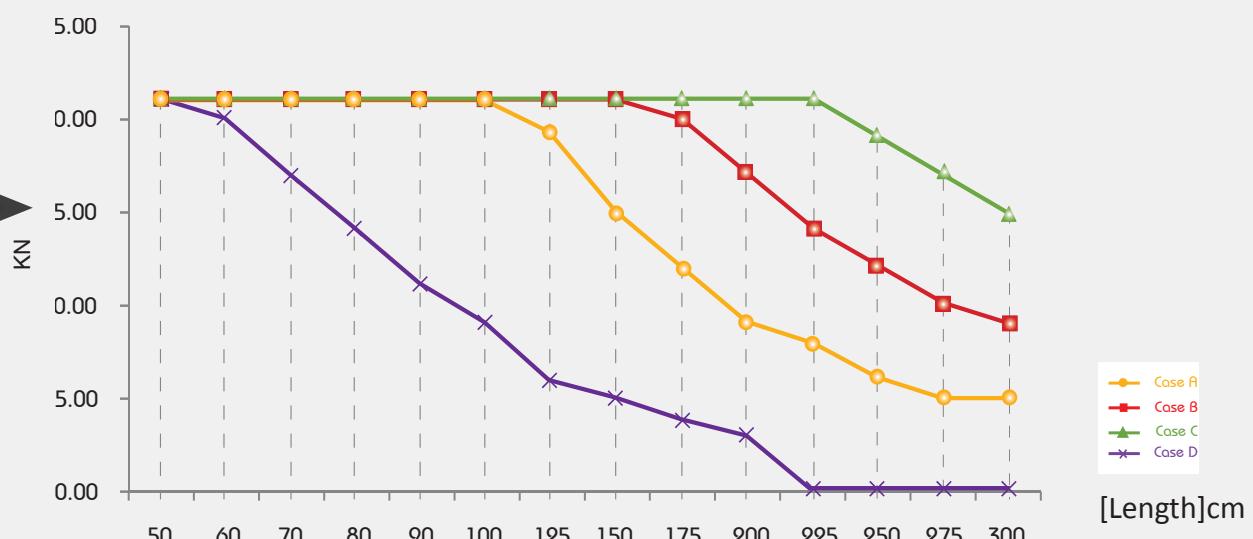


Column Load Data

Span (L) [cm]	Allowable Central Load** [KN]			
	Case A	Case B	Case C	Case D
50	24.00	24.00	24.00	24.00
60	24.00	24.00	24.00	24.00
70	24.00	24.00	24.00	24.00
80	24.00	24.00	24.00	24.00
90	24.00	24.00	24.00	23.00
100	24.00	24.00	24.00	20.00
125	24.00	24.00	24.00	14.00
150	24.00	24.00	24.00	10.00
175	24.00	24.00	24.00	8.00
200	20.00	24.00	24.00	6.00
225	17.00	24.00	24.00	5.00
250	14.00	24.00	24.00	4.40
275	12.00	21.00	24.00	3.70
300	10.00	19.00	24.00	x



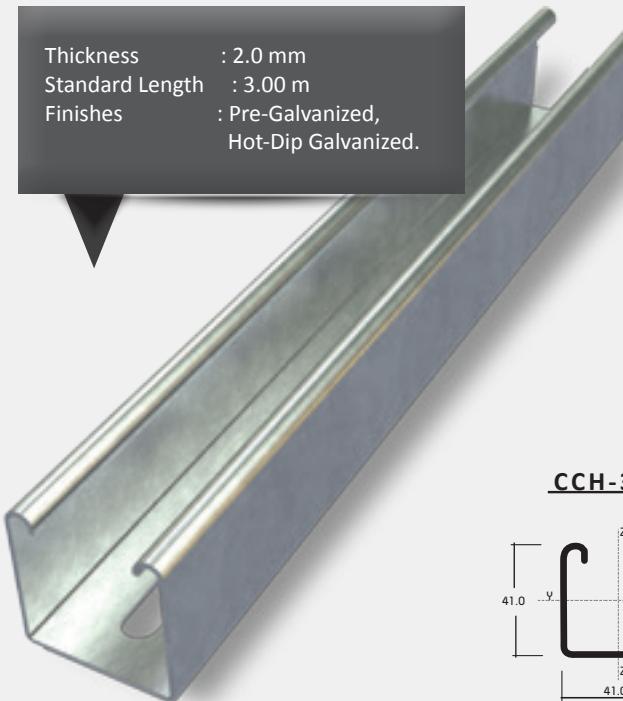
Allowable Central Load**



** Given loads are always "allowable characteristic live load"

Load table for single beam with uniform (characteristic) Live-Load

This associated data are considered for perforated and non-perforated c-channel types according to DIN 18.800

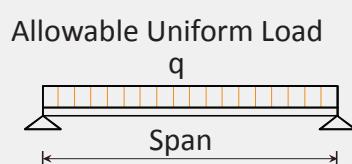
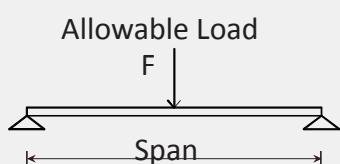


C-Channel: 41x41x2.0		
Area of Shear (A_s)	1.34	cm ²
Moment of Inertia (I_y)	4.59	cm ⁴
Moment of Inertia (I_z)	6.99	cm ⁴
min. Section Modulus (S_y)	2.18	cm ³
Warping Constant (I_w)	138.49	cm ⁶
Torsional Constant (I_t)	0.03	cm ⁴
Plastic Moment cap. ($M_{pl,y}$)	0.64	kNm
Self weight (G)	1.83	kg/m

Chosen Material: 40 B = S 235 JRG2		
Allowable Bending Stress	21,82	kN/cm ²
Allowable Shear Stress	12,60	kN/cm ²
Modulus of Elasticity	21.000	kN/cm ²

Beam Load Data

Span (L) [cm]	Allowable Load*		Deflection		Uniform Load* @	
	q [kN/m]	F [kN]	U [mm]	[L / X]	q [kN/m]	q [kN/m]
50	8.10	2.00	0.85	580	8.10	8.10
60	5.60	1.70	1.23	490	5.60	5.60
70	4.10	1.40	1.66	420	4.10	4.10
80	3.20	1.30	2.21	360	3.20	3.20
90	2.50	1.10	2.77	320	2.30	2.50
100	2.00	1.00	3.38	300	1.60	2.00
125	1.30	0.80	5.36	230	0.80	1.30
150	0.90	0.70	7.69	190	0.50	0.90
175	0.66	0.60	10.45	170	0.30	0.60
200	0.51	0.50	13.78	150	0.20	0.40
225	0.40	0.50	17.31	130	x	0.30
250	0.32	0.40	21.11	120	x	0.20
275	0.27	0.37	26.07	110	x	x
300	0.23	0.35	31.46	100	x	x

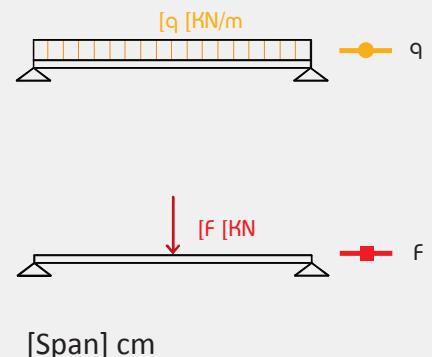
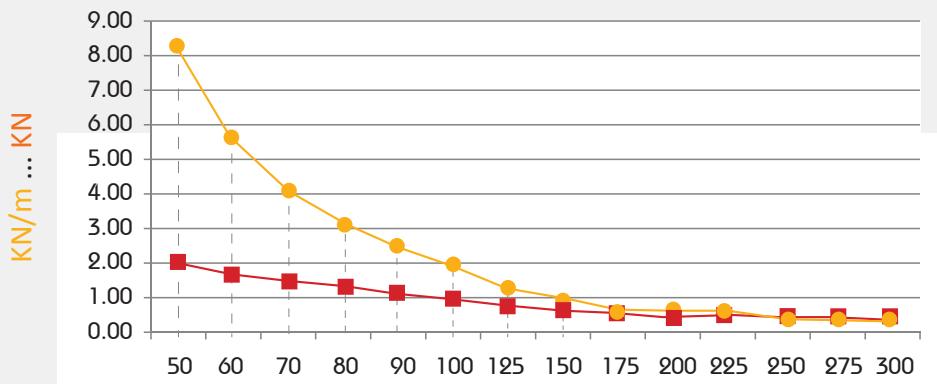


* Given loads are always "allowable characteristic live load"

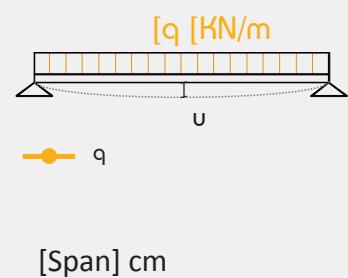
BEAM LOADING GRAPH

CCH-340/341

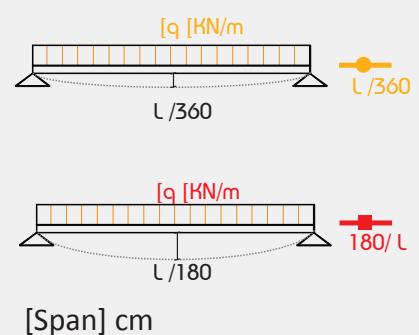
Allowable Loads



Deflection @ Allowable Uniform Load

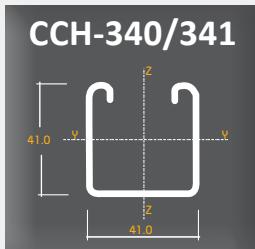


Uniform Load @ Allowable Deflection

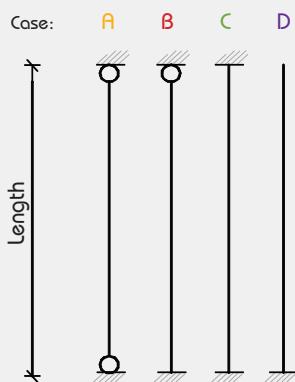


Load table for single beam with uniform (characteristic) Live-Load

This associated data are considered for perforated and non-perforated c-channel types according to DIN 18.800



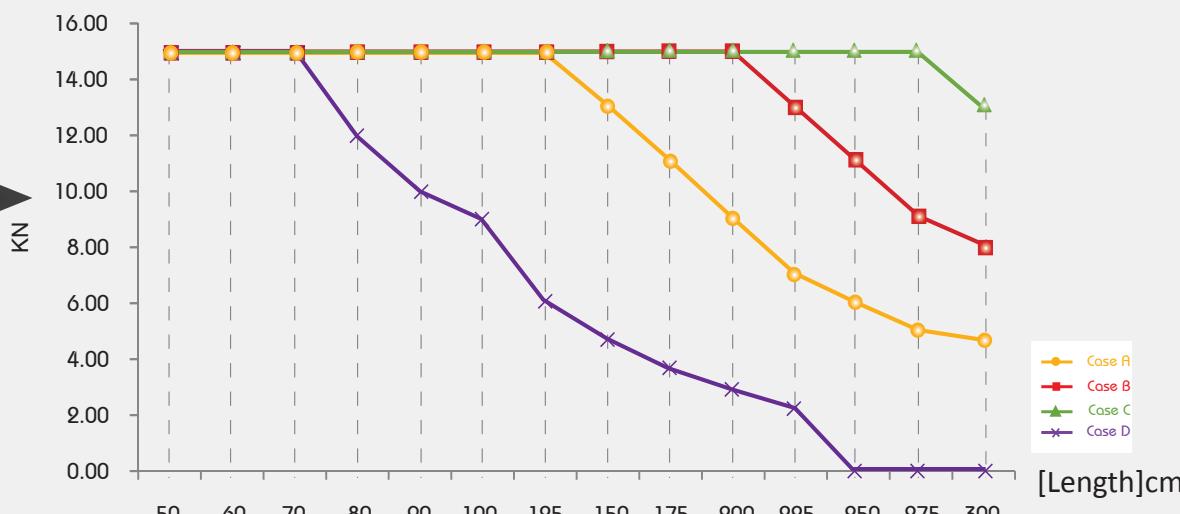
C-Channel: 41 x 41 x 2.0	
Cross Section Area (A)	2.33 cm ²
Moment of Inertia (I_y)	4.59 cm ⁴
Moment of Inertia (I_z)	6.99 cm ⁴
Self weight (G)	1.83 kg/m



Span (L) [cm]	Allowable Central Load** [KN]			
	Case A	Case B	Case C	Case D
50	15.00	15.00	15.00	15.00
60	15.00	15.00	15.00	15.00
70	15.00	15.00	15.00	15.00
80	15.00	15.00	15.00	12.00
90	15.00	15.00	15.00	10.00
100	15.00	15.00	15.00	9.00
125	15.00	15.00	15.00	6.00
150	13.00	15.00	15.00	4.70
175	11.00	15.00	15.00	3.60
200	9.00	15.00	15.00	2.80
225	7.00	13.00	15.00	2.20
250	6.00	11.00	15.00	x
275	5.00	9.00	15.00	x
300	4.70	8.00	13.00	x

Column
Load
Data

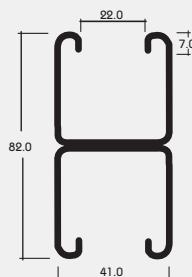
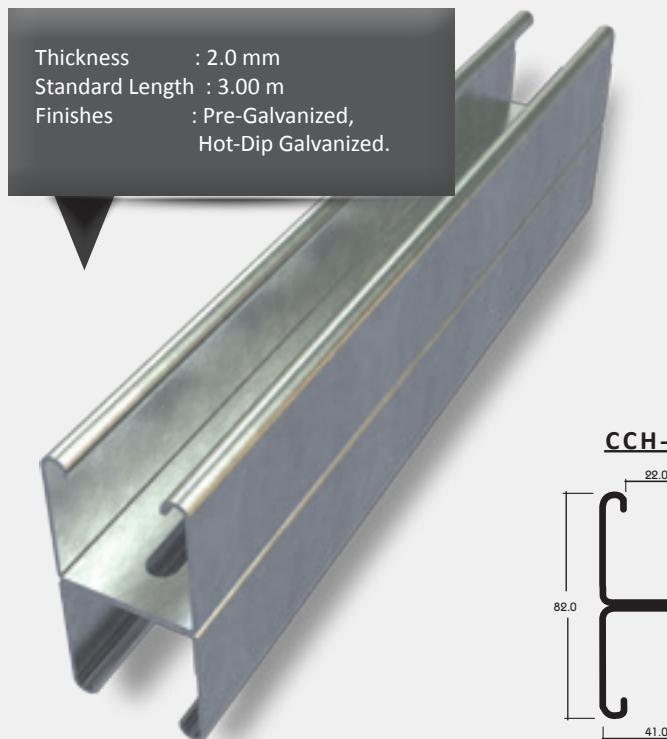
Allowable
Central
Load**



** Given loads are always "allowable characteristic live load"

Load table for single beam with uniform (characteristic) Live-Load

This associated data are considered for perforated and non-perforated c-channel types according to DIN 18.800

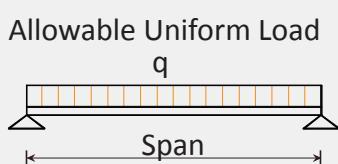
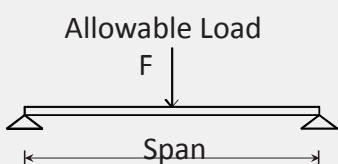


C-Channel:	41x41x2.0 b2b
Area of Shear (A_s)	1.88 cm ²
Moment of Inertia (I_y)	26.81 cm ⁴
Moment of Inertia (I_z)	14.04 cm ⁴
min. Section Modulus (S_y)	6.62 cm ³
Warping Constant (I_w)	113.65 cm ⁶
Torsional Constant (I_T)	0.08 cm ⁴
Plastic Moment cap. ($M_{pl,y}$)	1.98 kNm
Self weight (G)	3.76 kg/m

Chosen Material:	40 B = S 235 JRG2
Allowable Bending Stress	21,82 kN/cm ²
Allowable Shear Stress	12,60 kN/cm ²
Modulus of Elasticity	21.000 kN/cm ²

Beam Load Data

Span (L) [cm]	Allowable Load*		Deflection		Uniform Load* @	
	q [kN/m]	F [kN]	U [mm]	[L / X]	q [kN/m]	q [kN/m]
50	24.70	6.20	0.45	1.120	24.70	24.70
60	17.10	5.10	0.64	940	17.10	17.10
70	12.60	4.40	0.87	800	12.60	12.60
80	9.60	3.80	1.14	700	9.60	9.60
90	7.60	3.40	1.44	620	7.60	7.60
100	6.20	3.10	1.79	560	6.20	6.20
125	3.90	2.40	2.75	450	3.90	3.90
150	2.70	2.00	3.9	380	2.70	2.70
175	2.00	1.80	5.42	320	1.80	2.00
200	1.50	1.50	6.4	290	1.20	1.50
225	1.10	1.20	8.15	280	0.80	1.10
250	0.90	1.10	10.16	250	0.60	0.90
275	0.66	0.90	10.91	250	0.50	0.70
300	0.52	0.80	12.18	250	0.40	0.50

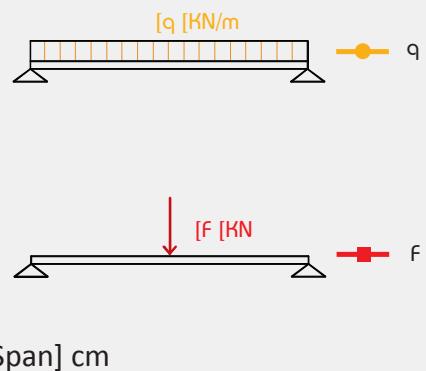
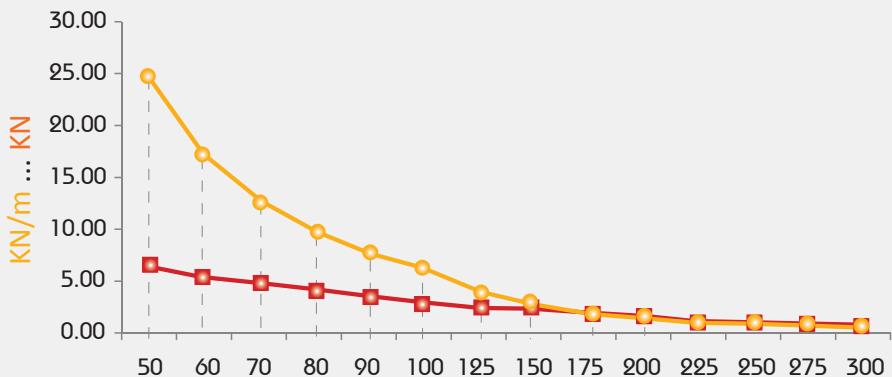


* Given loads are always "allowable characteristic live load"

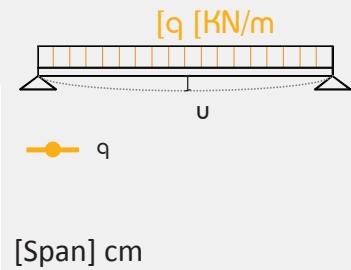
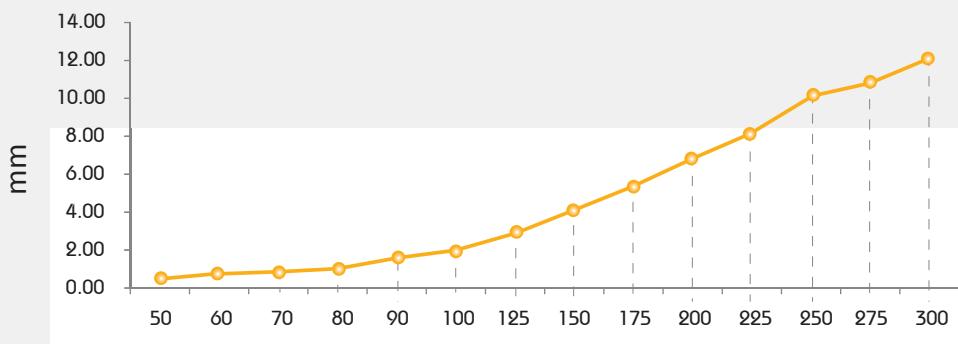
BEAM LOADING GRAPH

CCH-342

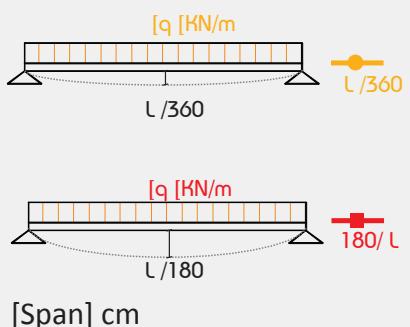
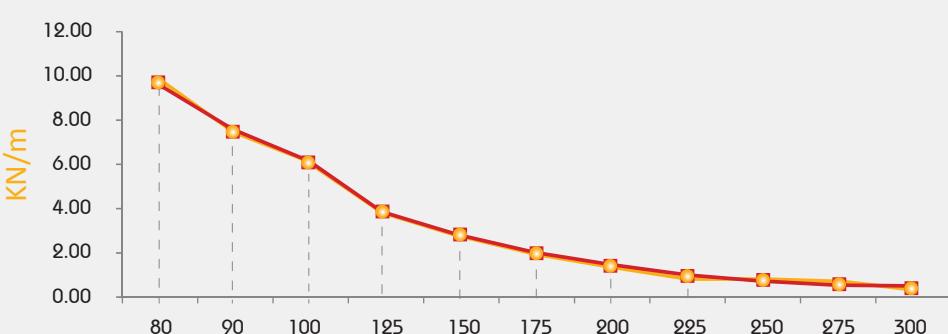
Allowable Loads



Deflection @ Allowable Uniform Load



Uniform Load @ Allowable Deflection



Load table for single beam with uniform (characteristic) Live-Load

This associated data are considered for perforated and non-perforated c-channel types according to DIN 18.800

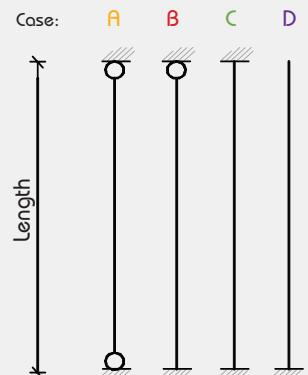
C-Channel:	$41 \times 41 \times 2.0 \text{ b2b}$	
Cross Section Area (A)	4.79	cm^2
Moment of Inertia (I_y)	26.81	cm^4
Moment of Inertia (I_z)	14.04	cm^4
Self weight (G)	3.76	kg/m

CCH-342

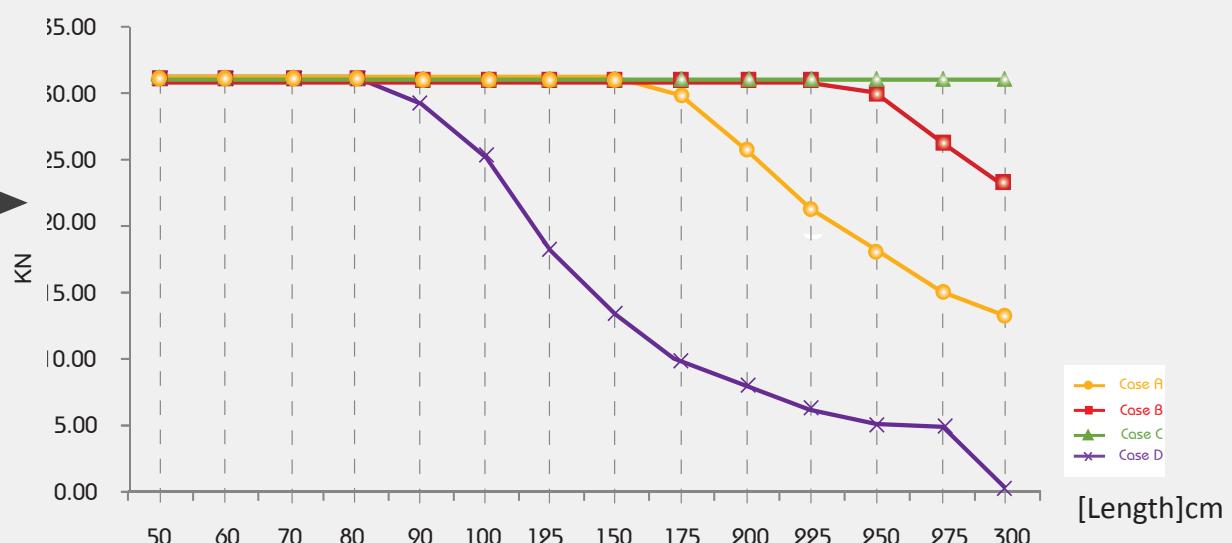


Column Load Data

Span (L) [cm]	Allowable Central Load** [KN]			
	Case A	Case B	Case C	Case D
50	31.00	31.00	31.00	31.00
60	31.00	31.00	31.00	31.00
70	31.00	31.00	31.00	31.00
80	31.00	31.00	31.00	31.00
90	31.00	31.00	31.00	29.00
100	31.00	31.00	31.00	25.00
125	31.00	31.00	31.00	18.00
150	31.00	31.00	31.00	13.00
175	30.00	31.00	31.00	10.00
200	25.00	31.00	31.00	8.00
225	21.00	31.00	31.00	6.00
250	18.00	30.00	31.00	5.00
275	15.00	26.00	31.00	4.60
300	13.00	23.00	31.00	x



Allowable Central Load**



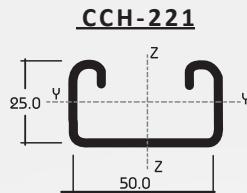
** Given loads are always "allowable characteristic live load"

Load table for single beam with uniform (characteristic) Live-Load

This associated data are considered for perforated and non-perforated c-channel types according to DIN 18.800



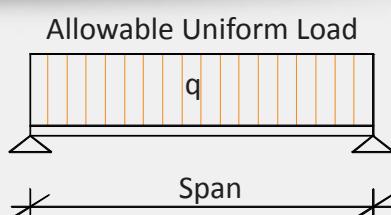
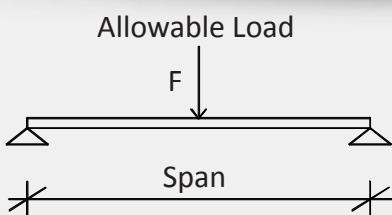
C-Channel:	50 x 25 x 2.0
Area of Shear (A_z)	0.68 cm^2
Moment of Inertia (I_y)	1.51 cm^4
Moment of Inertia (I_z)	7.87 cm^4
min. Section Modulus (S_y)	1.05 cm^3
Warping Constant (I_w)	50.65 cm^6
Torsional Constant (I_T)	0.03 cm^4
Plastic Moment cap. ($M_{pl,y}$)	0.34 kNm
Self weight (G)	1.55 kg/m



Chosen Material:	S 235 JRG2
Allowable Bending Stress	21,82 kN/cm^2
Allowable Shear Stress	12,60 kN/cm^2
Modulus of Elasticity	21.000 kN/cm^2

Beam Load Data

Span (L) [cm]	Allowable Load*		Deflection		Uniform Load* @	
	q [kN/m]	F [kN]	U [mm]	[L / X]	q [kN/m]	q [kN/m]
30	10.90	1.60	0.40	750	10.90	10.90
40	6.10	1.20	0.71	570	6.10	6.10
50	3.90	1.00	1.11	450	3.90	3.90
60	2.70	0.80	1.59	380	2.50	2.70
70	2.00	0.70	2.19	320	1.58	1.99
80	1.50	0.60	2.80	290	1.06	1.53
90	1.20	0.54	3.60	250	0.74	1.21
100	1.00	0.50	4.59	220	0.54	0.98
125	0.63	0.39	7.12	180	0.28	0.55
150	0.43	0.32	10.19	150	0.16	0.32
175	0.32	0.28	14.21	120	x	0.20
200	0.24	0.24	18.46	110	x	x
225	0.19	0.21	23.79	90	x	x
250	x	x	x	x	x	x
275	x	x	x	x	x	x
300	x	x	x	x	x	x



* Given loads are always "allowable characteristic live load"

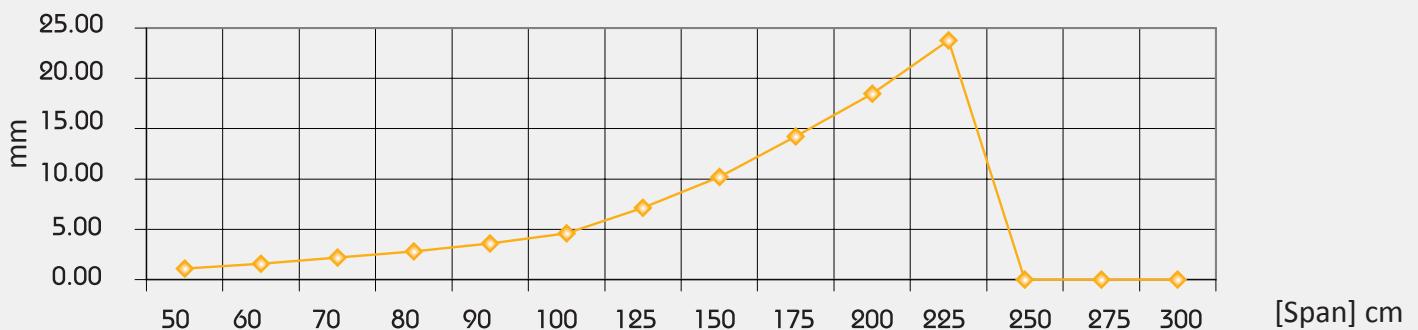
BEAM LOADING GRAPH

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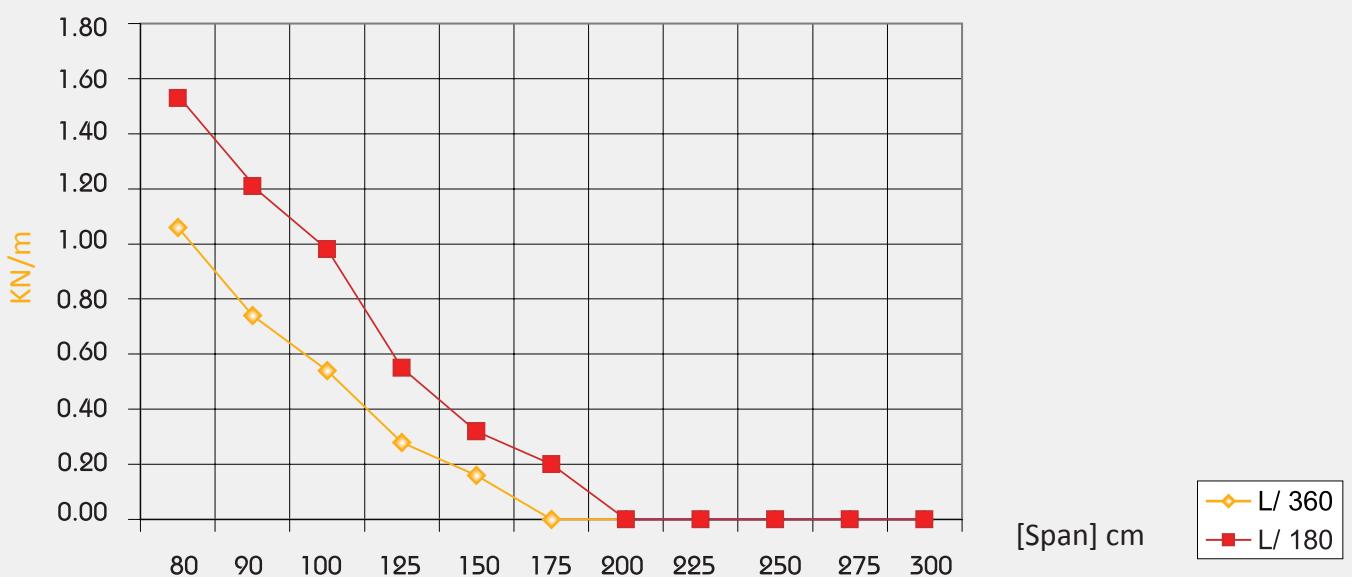
Allowable Loads



Deflection @ Allowable Uniform Load

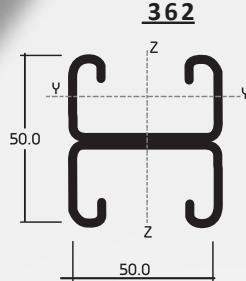
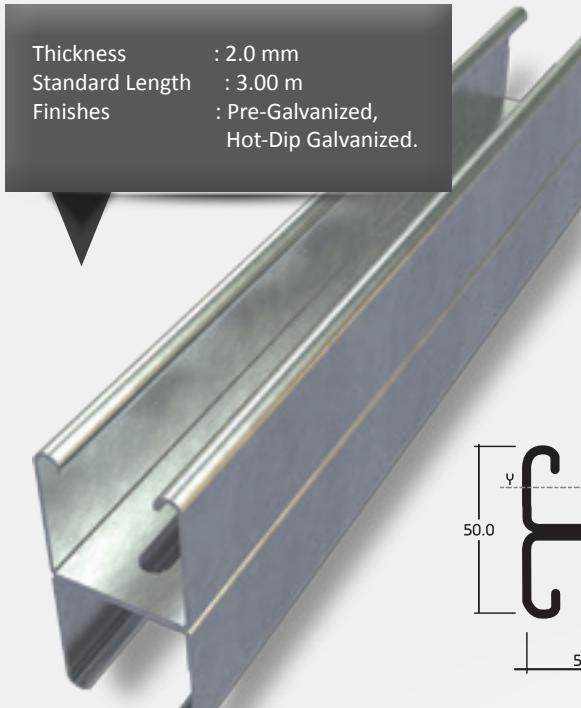


Uniform Load @ Allowable Deflection



Load table for single beam with uniform (characteristic) Live-Load

This associated data are considered for perforated and non-perforated c-channel types according to DIN 18.800



C-Channel: 50 x 25 x 2.0 b2b

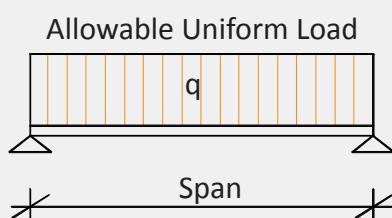
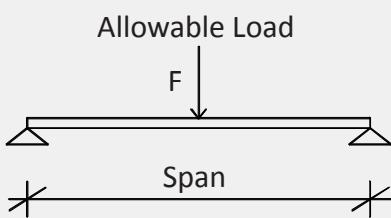
Area of Shear (A_z)	1.39	cm ²
Moment of Inertia (I_y)	7.33	cm ⁴
Moment of Inertia (I_z)	15.75	cm ⁴
min. Section Modulus (S_y)	2.93	cm ³
Warping Constant (I_w)	43.54	cm ⁶
Torsional Constant (I_T)	0.06	cm ⁴
Plastic Moment cap. ($M_{pl,y}$)	0.88	kNm
Self weight (G)	3.00	kg/m

Chosen Material: S 235 JRG2

Allowable Bending Stress	21,82	kN/cm ²
Allowable Shear Stress	12,60	kN/cm ²
Modulus of Elasticity	21.000	kN/cm ²

Beam Load Data

Span (L) [cm]	Allowable Load*		Deflection		Uniform Load* @	
	q [kN/m]	F [kN]	U [mm]	[L / X]	q [kN/m]	q [kN/m]
50	10,90	2,70	0,64	790	10,90	10,90
60	7,60	2,30	0,92	650	7,60	7,60
70	5,60	2,00	1,26	560	5,60	5,60
80	4,30	1,70	1,65	480	4,30	4,30
90	3,40	1,50	2,09	430	3,40	3,40
100	2,70	1,40	2,54	390	2,60	2,70
125	1,70	1,10	3,93	320	1,30	1,70
150	1,20	0,90	5,79	260	0,80	1,20
175	0,90	0,79	8,12	220	0,49	0,89
200	0,68	0,68	10,57	190	0,33	0,66
225	0,54	0,61	13,59	170	0,23	0,46
250	0,44	0,55	17,08	150	0,17	0,34
275	0,36	0,50	20,75	130	x	0,25
300	0,30	0,45	24,87	120	x	0,19

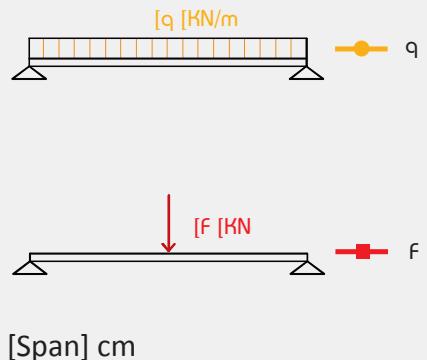
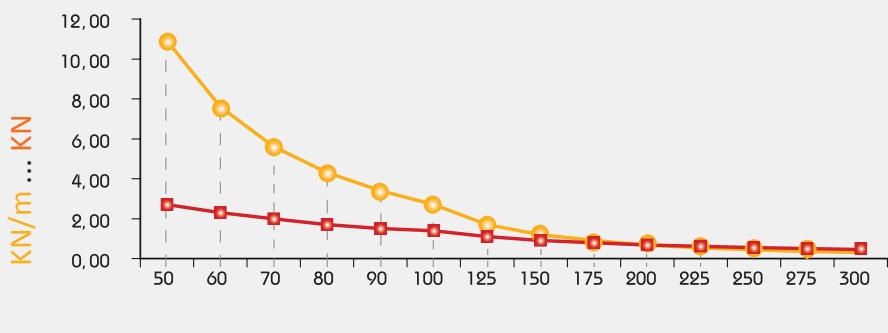


* Given loads are always "allowable characteristic live load"

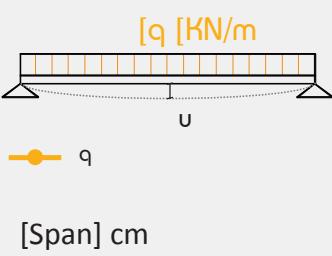
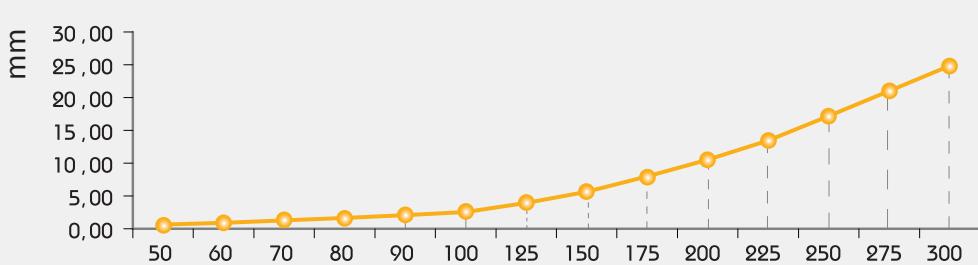
BEAM LOADING GRAPH

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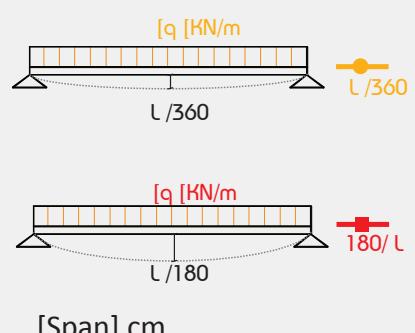
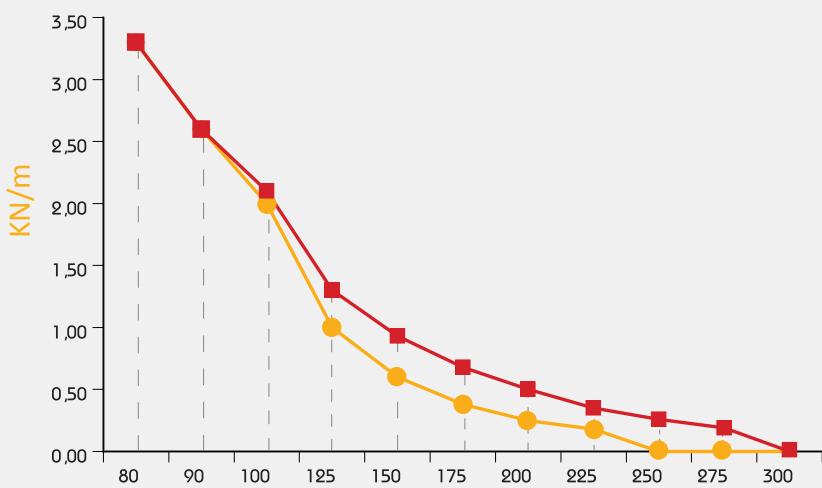
Allowable Loads



Deflection @ Allowable Uniform Load



Uniform Load @ Allowable Deflection



Load table for single beam with uniform (characteristic) Live-Load

This associated data are considered for perforated and non-perforated c-channel types according to DIN 18.800

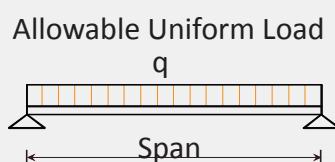
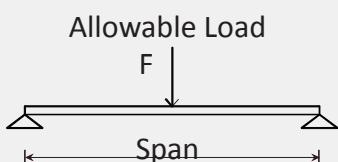


C-Channel:	41x21x2.5
Area of Shear (A_z)	0.67 cm^2
Moment of Inertia (I_y)	1.03 cm^4
Moment of Inertia (I_z)	5.07 cm^4
min. Section Modulus (S_y)	0.89 cm^3
Warping Constant (I_w)	24.34 cm^6
Torsional Constant (I_t)	0.06 cm^4
Plastic Moment cap. ($M_{pl,y}$)	0.29 kNm
Self weight (G)	1.56 kg/m

Chosen Material:	40 B = S 235 JRG2
Allowable Bending Stress	21,82 kN/cm^2
Allowable Shear Stress	12,60 kN/cm^2
Modulus of Elasticity	21.000 kN/cm^2

Beam Load Data

Span (L) [cm]	Allowable Load*		Deflection		Uniform Load* @	
	q [kN/m]	F [kN]	U [mm]	[L / X]	q [kN/m]	q [kN/m]
50	3.30	0.80	1.55	320	3.00	3.30
60	2.30	0.70	2.24	270	1.70	2.30
70	1.70	0.60	3.07	230	1.10	1.70
80	1.30	0.50	4.01	200	0.70	1.30
90	1.00	0.50	4.94	180	0.50	1.00
100	0.80	0.40	6.02	170	0.40	0.70
125	0.53	0.33	9.74	130	0.19	0.38
150	0.37	0.28	14.09	110	x	0.22
175	0.27	0.24	19.05	90	x	x
200	0.21	0.21	25.28	80	x	x
225	0.16	0.28	30.86	70	x	x
250	x	x	x	x	x	x
275	x	x	x	x	x	x
300	x	x	x	x	x	x

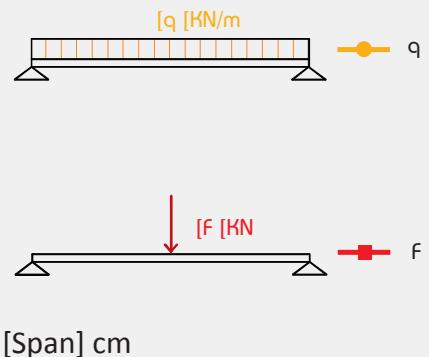
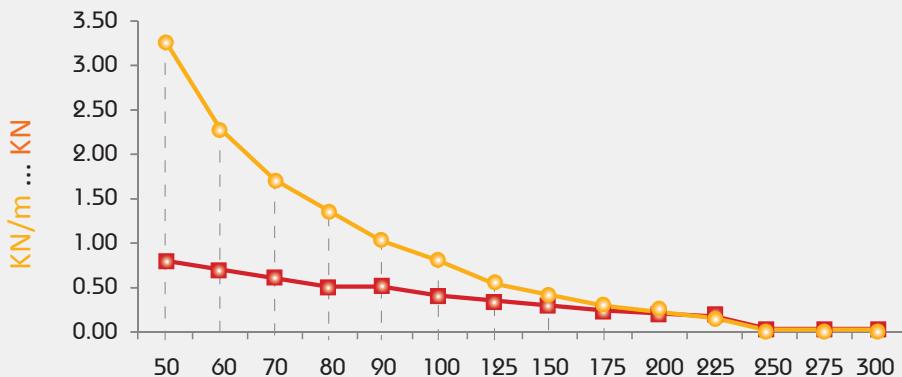


* Given loads are always "allowable characteristic live load"

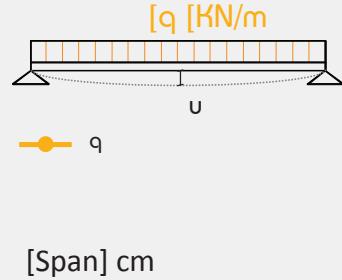
BEAM LOADING GRAPH

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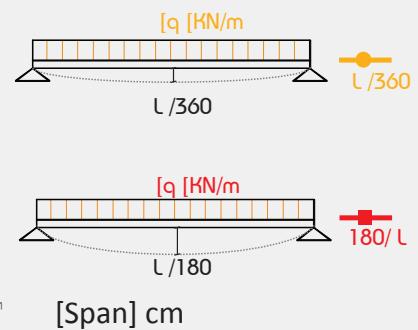
Allowable Loads



Deflection @ Allowable Uniform Load

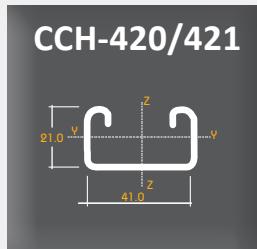


Uniform Load @ Allowable Deflection



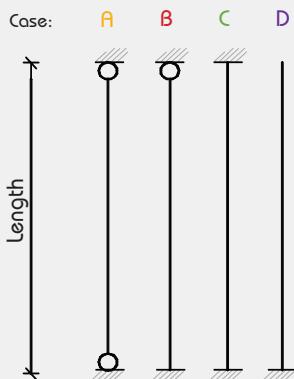
Load table for single beam with uniform (characteristic) Live-Load

This associated data are considered for perforated and non-perforated c-channel types according to DIN 18.800



C-Channel: **41 x 21 x 2.5**

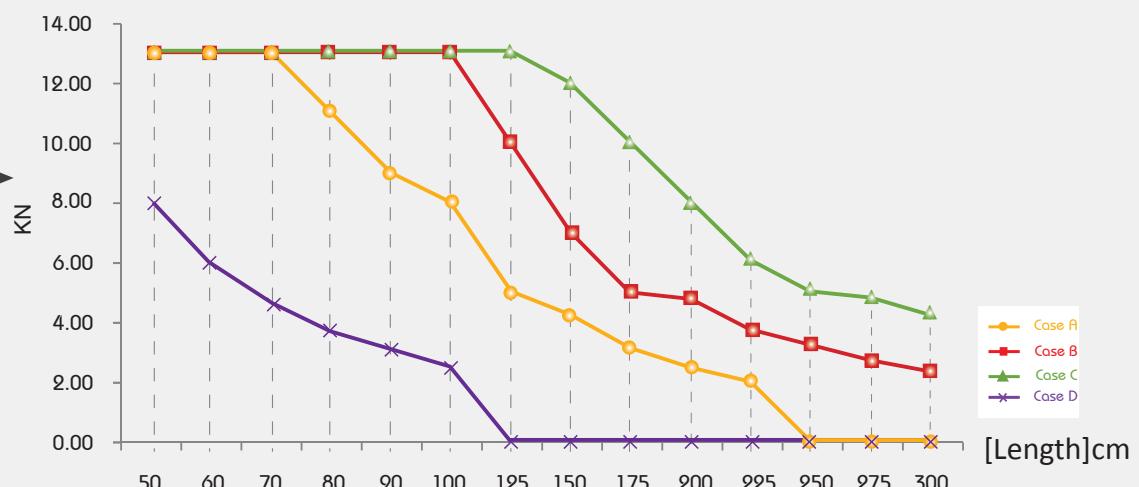
Cross Section Area (A)	1.99	cm ²
Moment of Inertia (I_y)	1.03	cm ⁴
Moment of Inertia (I_z)	5.07	cm ⁴
Self weight (G)	1.56	kg/m



Span (L) [cm]	Allowable Central Load** [KN]			
	Case A	Case B	Case C	Case D
50	13.00	13.00	13.00	8.00
60	13.00	13.00	13.00	6.00
70	13.00	13.00	13.00	4.70
80	11.00	13.00	13.00	3.70
90	9.00	13.00	13.00	3.00
100	8.00	13.00	13.00	2.50
125	5.00	10.00	13.00	x
150	4.20	7.00	12.00	x
175	3.20	5.00	10.00	x
200	2.50	4.70	8.00	x
225	2.00	3.80	6.00	x
250	x	3.20	5.00	x
275	x	2.70	4.90	x
300	x	2.30	4.20	x

**Column
Load
Data**

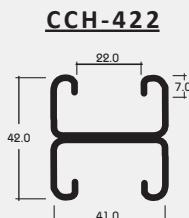
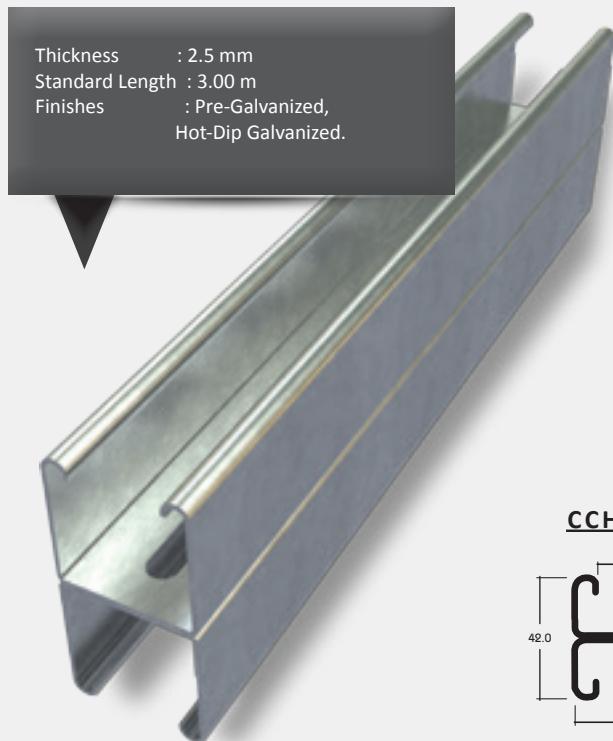
**Allowable
Central
Load****



** Given loads are always "allowable characteristic live load"

Load table for single beam with uniform (characteristic) Live-Load

This associated data are considered for perforated and non-perforated c-channel types according to DIN 18.800

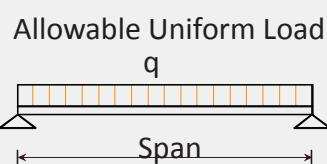
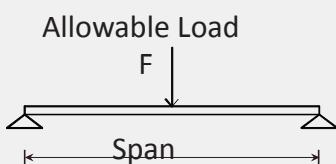


C-Channel:	41x21x2.5 b2b	
Area of Shear (A_z)	0.88	cm ²
Moment of Inertia (I_y)	5.55	cm ⁴
Moment of Inertia (I_z)	10.14	cm ⁴
min. Section Modulus (S_y)	2.65	cm ³
Warping Constant (I_w)	22.30	cm ⁶
Torsional Constant (I_T)	0.12	cm ⁴
Plastic Moment cap. ($M_{pl,y}$)	0.82	kNm
Self weight (G)	3.13	kg/m

Chosen Material:	40 B = S 235 JRG2	
Allowable Bending Stress	21,82	kN/cm ²
Allowable Shear Stress	12,60	kN/cm ²
Modulus of Elasticity	21.000	kN/cm ²

Beam Load Data

Span (L)	Allowable Load*		Deflection		Uniform Load* @	
	[cm]	q [kN/m]	F [kN]	U [mm]	[L / X]	q [kN/m]
50	9.90	2.50	0.86	580	9.90	9.90
60	6.90	2.10	1.25	480	6.90	6.90
70	5.00	1.80	1.68	420	5.00	5.00
80	3.90	1.60	2.23	360	3.90	3.90
90	3.00	1.40	2.75	330	2.70	3.00
100	2.50	1.30	3.49	290	2.00	2.50
125	1.60	1.00	5.46	230	1.00	1.60
150	1.10	0.80	7.78	190	0.60	1.10
175	0.80	0.70	10.48	170	0.40	0.70
200	0.62	0.60	13.85	140	0.20	0.50
225	0.49	0.60	17.54	130	0.20	0.30
250	0.39	0.50	21.27	120	x	0.30
275	0.33	0.50	26.36	100	x	0.20
300	0.27	0.40	30.54	100	x	x

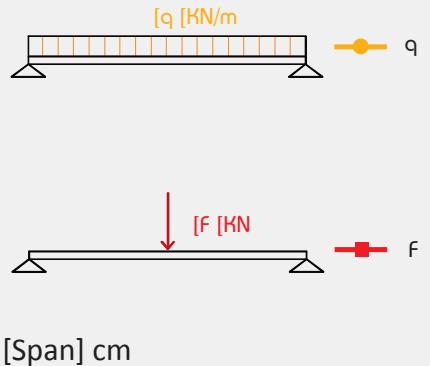
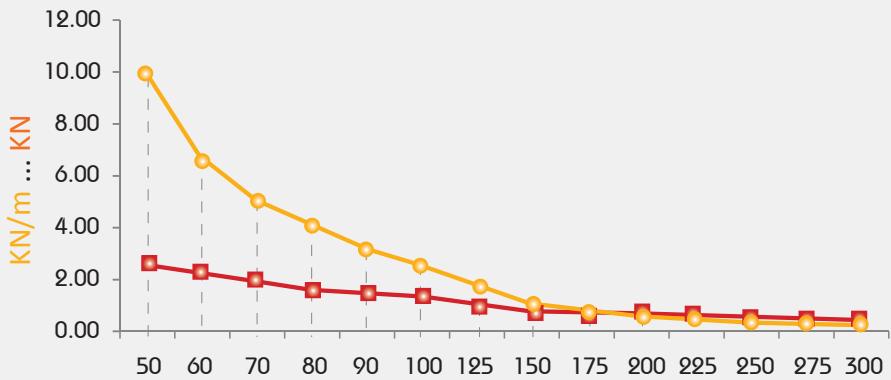


* Given loads are always "allowable characteristic live load"

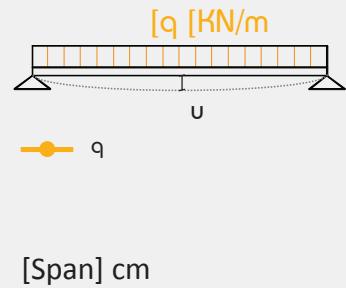
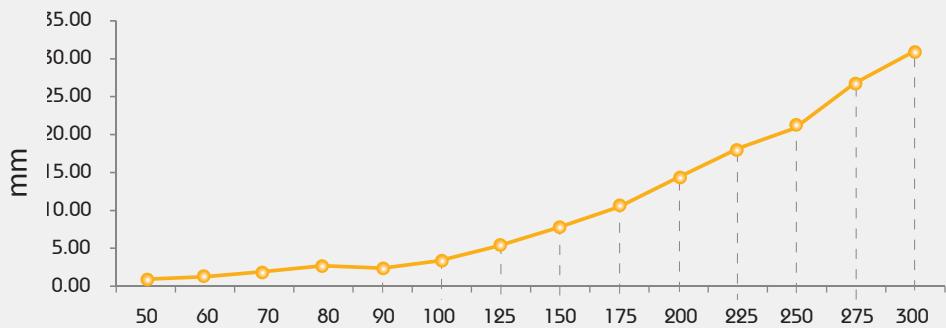
BEAM LOADING GRAPH

CCH-422

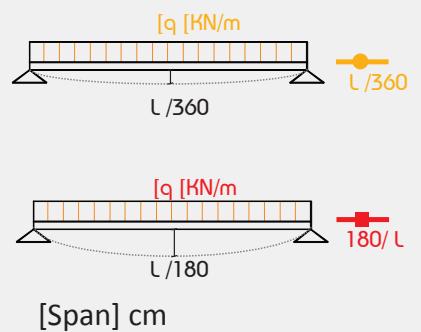
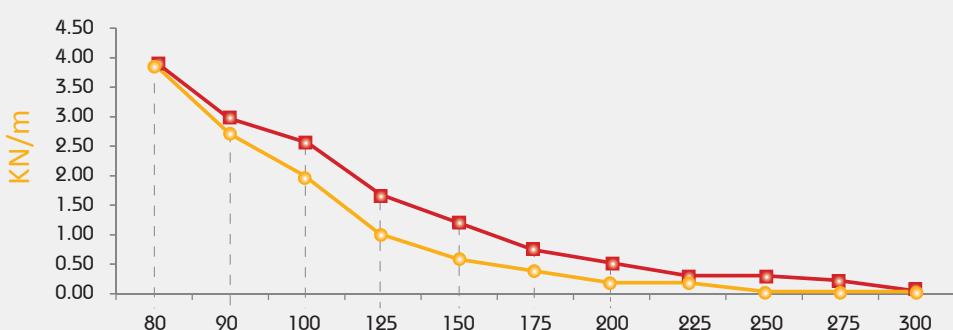
Allowable Loads



Deflection @ Allowable Uniform Load



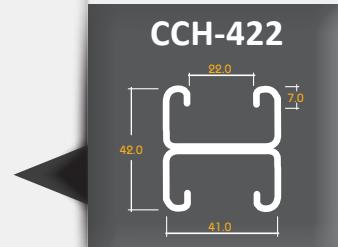
Uniform Load @ Allowable Deflection



Load table for single beam with uniform (characteristic) Live-Load

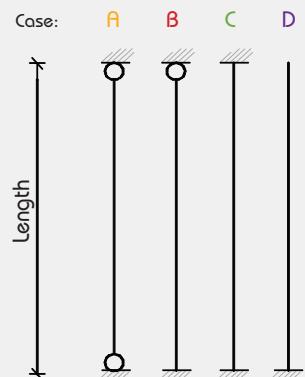
This associated data are considered for perforated and non-perforated c-channel types according to DIN 18.800

C-Channel:		41 x 21 x 2.5 b2b
Cross Section Area (A)	3.99	cm ²
Moment of Inertia (I_y)	5.55	cm ⁴
Moment of Inertia (I_z)	10.14	cm ⁴
Self weight (G)	3.13	kg/m

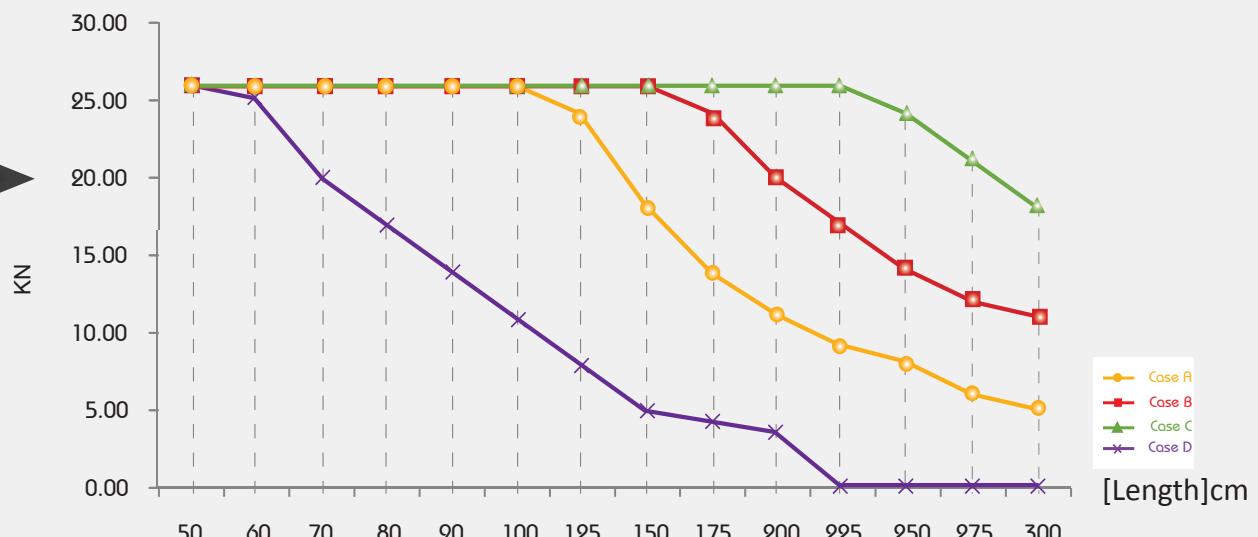


Column Load Data

Span (L) [cm]	Allowable Central Load** [KN]			
	Case A	Case B	Case C	Case D
50	26.00	26.00	26.00	26.00
60	26.00	26.00	26.00	25.00
70	26.00	26.00	26.00	20.00
80	26.00	26.00	26.00	17.00
90	26.00	26.00	26.00	14.00
100	26.00	26.00	26.00	11.00
125	24.00	26.00	26.00	8.00
150	18.00	26.00	26.00	5.00
175	14.00	24.00	26.00	4.40
200	11.00	20.00	26.00	3.50
225	9.00	17.00	26.00	x
250	8.00	14.00	24.00	x
275	6.00	12.00	21.00	x
300	5.00	11.00	18.00	x



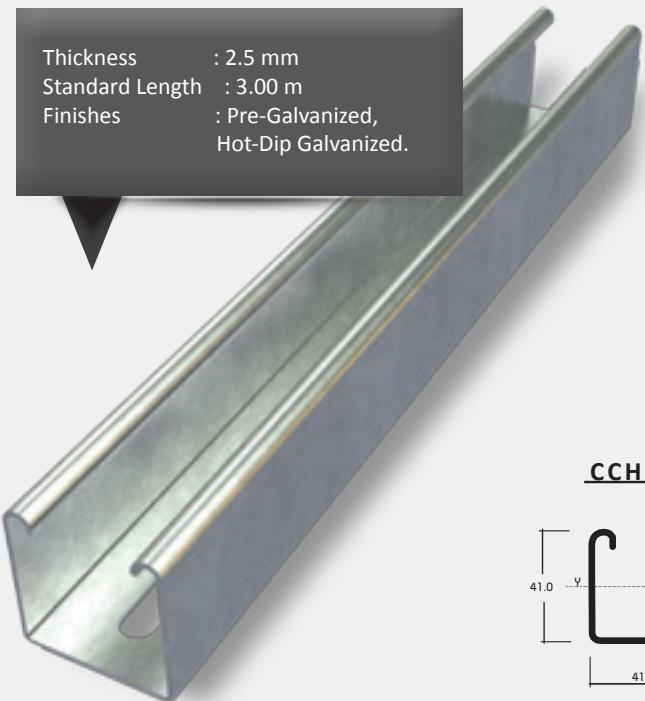
Allowable Central **Load



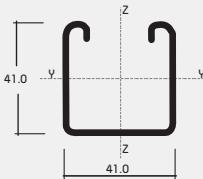
** Given loads are always "allowable characteristic live load"

Load table for single beam with uniform (characteristic) Live-Load

This associated data are considered for perforated and non-perforated c-channel types according to DIN 18.800



CCH-440

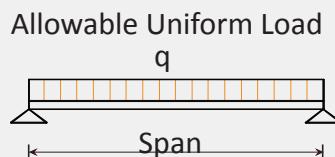
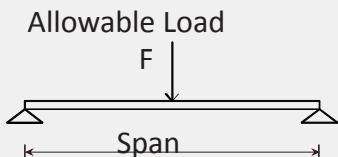


C-Channel: 41x41x2.5		
Area of Shear (A_z)	1.67	cm^2
Moment of Inertia (I_y)	5.87	cm^4
Moment of Inertia (I_z)	8.76	cm^4
min. Section Modulus (S_y)	2.72	cm^3
Warping Constant (I_w)	171.52	cm^6
Torsional Constant (I_t)	0.07	cm^4
Plastic Moment cap. ($M_{pl,y}$)	0.82	kNm
Self weight (G)	2.32	kg/m

Chosen Material: 40 B = S 235 JRG2		
Allowable Bending Stress	21,82	kN/cm^2
Allowable Shear Stress	12,60	kN/cm^2
Modulus of Elasticity	21.000	kN/cm^2

Beam Load Data

Span (L)	Allowable Load*		Deflection		@ *Uniform Load	
	[cm]	[q [kN/m]	[F [kN]	[U [mm]	[L / X]	[q [kN/m]
50	10.10	2.50	0.83	600	10.10	10.10
60	7.00	2.10	1.20	500	7.00	7.00
70	5.20	1.80	1.65	420	5.20	5.20
80	4.00	1.60	2.16	370	4.00	4.00
90	3.10	1.40	2.69	340	2.90	3.10
100	2.50	1.30	3.30	300	2.10	2.50
125	1.60	1.00	5.16	240	1.10	1.60
150	1.10	0.80	7.35	200	0.60	1.10
175	0.80	0.70	9.91	180	0.40	0.80
200	0.63	0.60	13.31	150	0.30	0.50
225	0.50	0.60	16.92	130	0.20	0.40
250	0.41	0.50	21.15	120	x	0.30
275	0.33	0.50	24.92	110	x	0.20
300	0.28	0.40	29.95	100	x	x

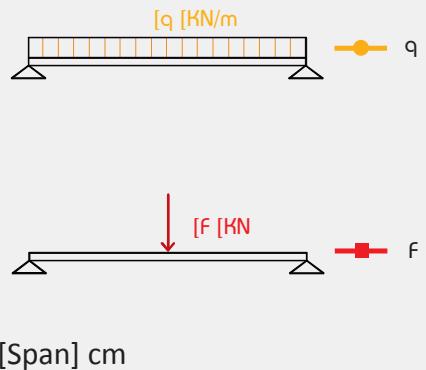


* Given loads are always "allowable characteristic live load"

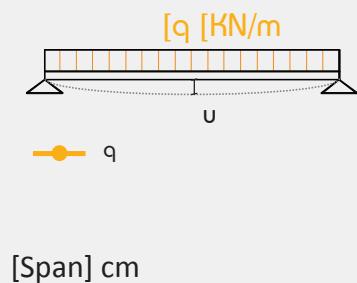
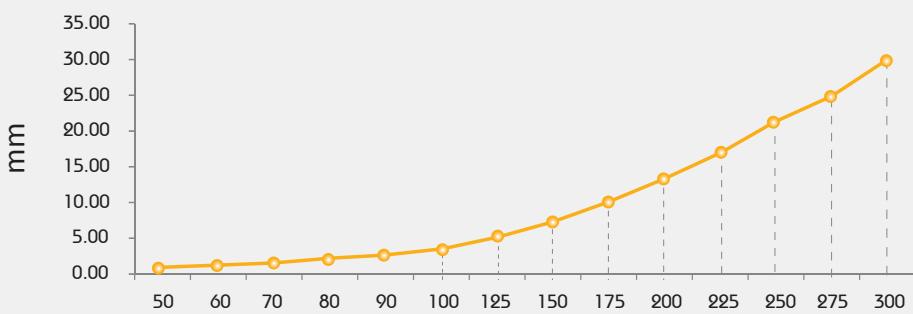
BEAM LOADING GRAPH

CCH-440/441

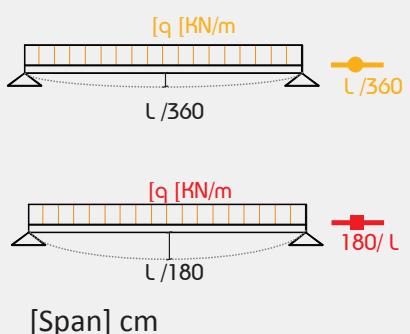
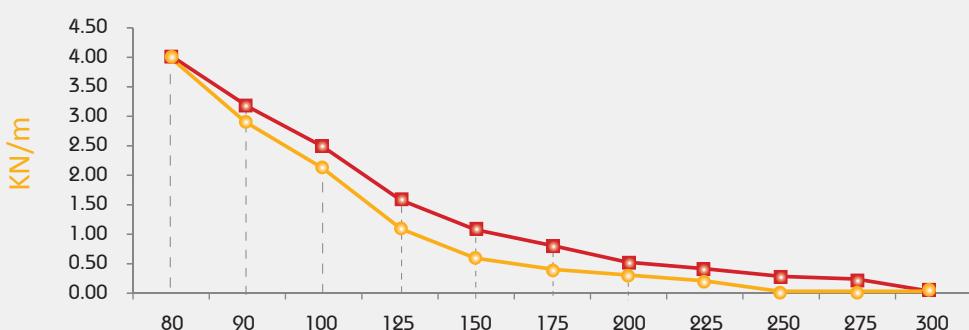
Allowable Loads



Deflection @ Allowable Uniform Load

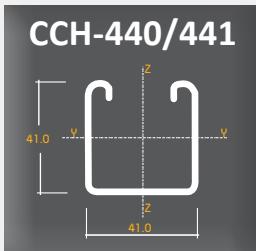


Uniform Load @ Allowable Deflection

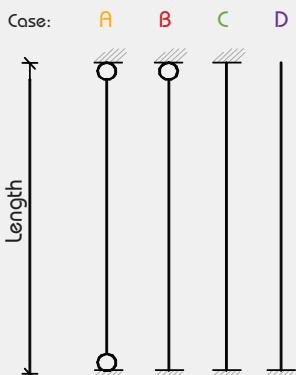


Load table for single beam with uniform (characteristic) Live-Load

This associated data are considered for perforated and non-perforated c-channel types according to DIN 18.800



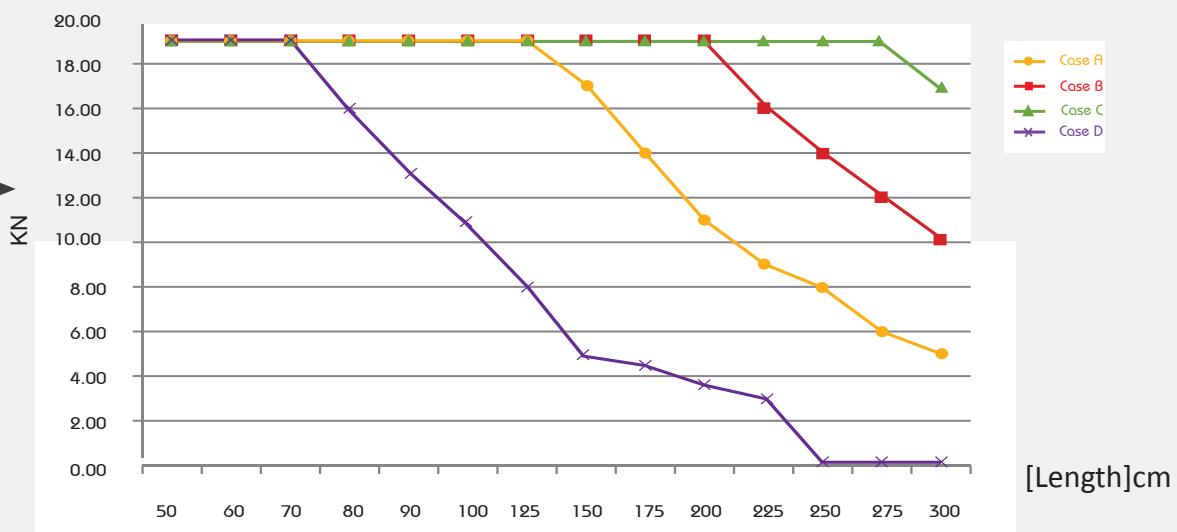
C-Channel:		41 x 41 x 2.5
Cross Section Area (A)	2.95	cm ²
Moment of Inertia (I_y)	5.87	cm ⁴
Moment of Inertia (I_z)	8.76	cm ⁴
Self weight (G)	2.32	kg/m



Span (L) [cm]	Allowable Central Load** [KN]			
	Case A	Case B	Case C	Case D
50	19.00	19.00	19.00	19.00
60	19.00	19.00	19.00	19.00
70	19.00	19.00	19.00	19.00
80	19.00	19.00	19.00	16.00
90	19.00	19.00	19.00	13.00
100	19.00	19.00	19.00	11.00
125	19.00	19.00	19.00	8.00
150	17.00	19.00	19.00	5.00
175	14.00	19.00	19.00	4.50
200	11.00	19.00	19.00	3.60
225	9.00	16.00	19.00	2.90
250	8.00	14.00	19.00	x
275	6.00	12.00	19.00	x
300	5.00	10.00	17.00	x

**Column
Load
Data**

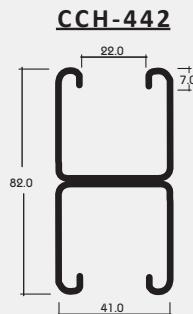
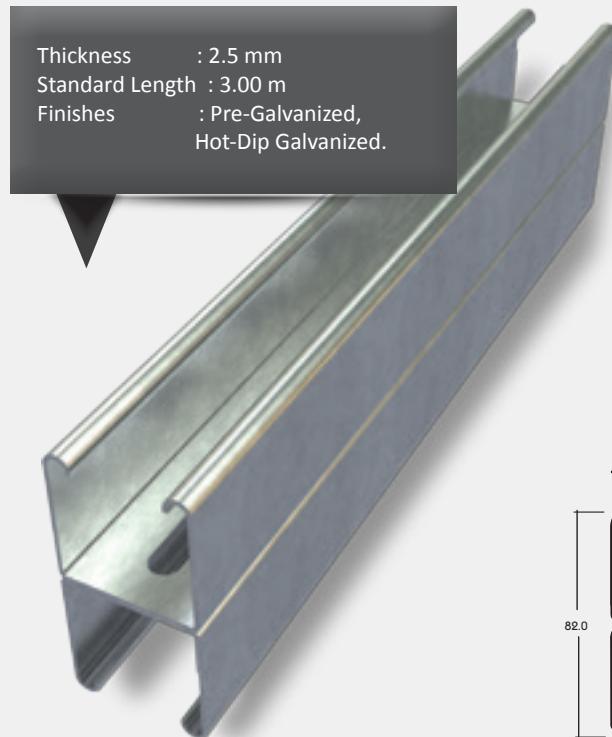
**Allowable
Central
Load****



** Given loads are always "allowable characteristic live load"

Load table for single beam with uniform (characteristic) Live-Load

This associated data are considered for perforated and non-perforated c-channel types according to DIN 18.800

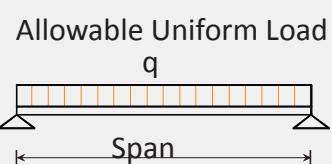
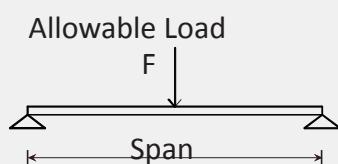


C-Channel:	41x41x2.5 b2b	
Area of Shear (A_z)	2.37	cm ²
Moment of Inertia (I_y)	34.08	cm ⁴
Moment of Inertia (I_z)	17.56	cm ⁴
min. Section Modulus (S_y)	8.31	cm ³
Warping Constant (I_w)	140.95	cm ⁶
Torsional Constant (I_t)	0.16	cm ⁴
Plastic Moment cap. ($M_{pl,y}$)	2.51	kNm
Self weight (G)	4.70	kg/m

Chosen Material:	40 B = S 235 JRG2	
Allowable Bending Stress	21,82	kN/cm ²
Allowable Shear Stress	12,60	kN/cm ²
Modulus of Elasticity	21.000	kN/cm ²

Beam Load Data

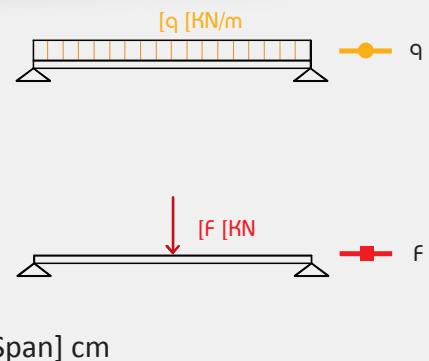
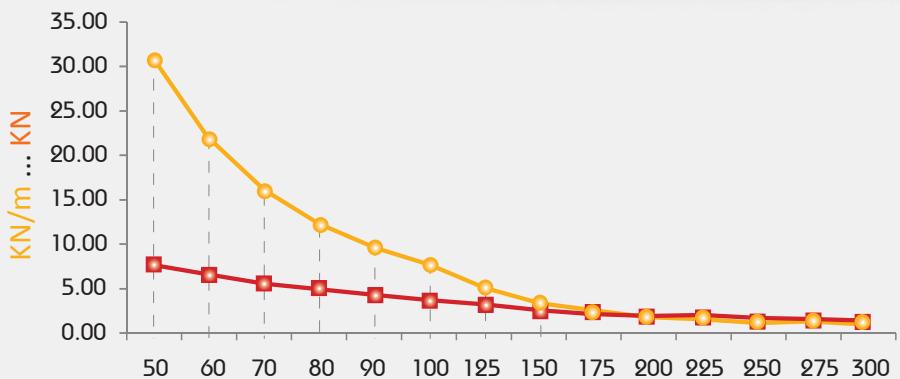
Span (L) [cm]	Allowable Load*		Deflection		Uniform Load* @	
	q [kN/m]	F [kN]	U [mm]	[L / X]	q [kN/m]	q [kN/m]
50	30.90	7.70	0.44	1.140	30.90	30.90
60	21.50	6.50	0.63	950	21.50	21.50
70	15.80	5.50	0.86	810	15.80	15.80
80	12.10	4.80	1.13	710	12.10	12.10
90	9.60	4.30	1.43	630	9.60	9.60
100	7.70	3.90	1.75	570	7.70	7.70
125	5.00	3.10	2.78	450	5.00	5.00
150	3.40	2.60	3.91	380	3.40	3.40
175	2.50	2.20	5.33	330	2.30	2.50
200	1.90	1.90	6.91	290	1.50	1.90
225	1.50	1.70	8.74	260	1.10	1.50
250	1.20	1.50	10.66	230	0.80	1.20
275	1.00	1.40	13.01	210	0.60	1.00
300	0.77	1.20	14.18	210	0.50	0.80



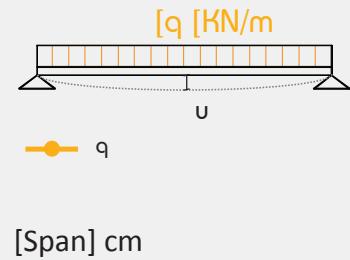
* Given loads are always "allowable characteristic live load"

BEAM LOADING GRAPH CCH-442

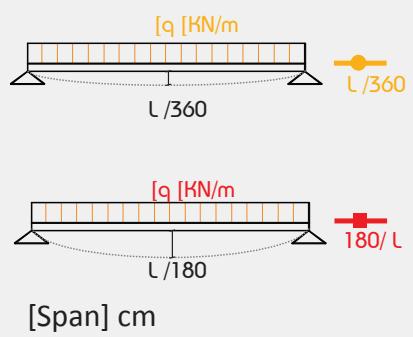
Allowable Loads



Deflection @ Allowable Uniform Load



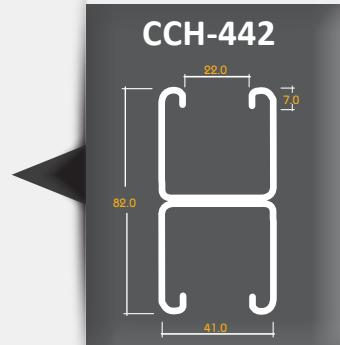
Uniform Load @ Allowable Deflection



Load table for single beam with uniform (characteristic) Live-Load

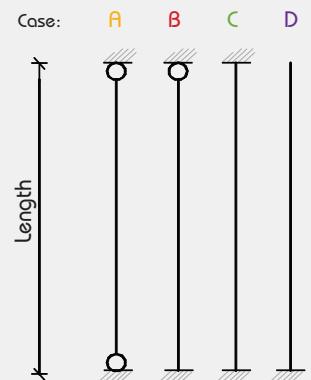
This associated data are considered for perforated and non-perforated c-channel types according to DIN 18.800

C-Channel: 41 x 41 x 2.5 b2b	
Cross Section Area (A)	5.99 cm ²
Moment of Inertia (I_y)	34.08 cm ⁴
Moment of Inertia (I_z)	17.56 cm ⁴
Self weight (G)	4.70 kg/m

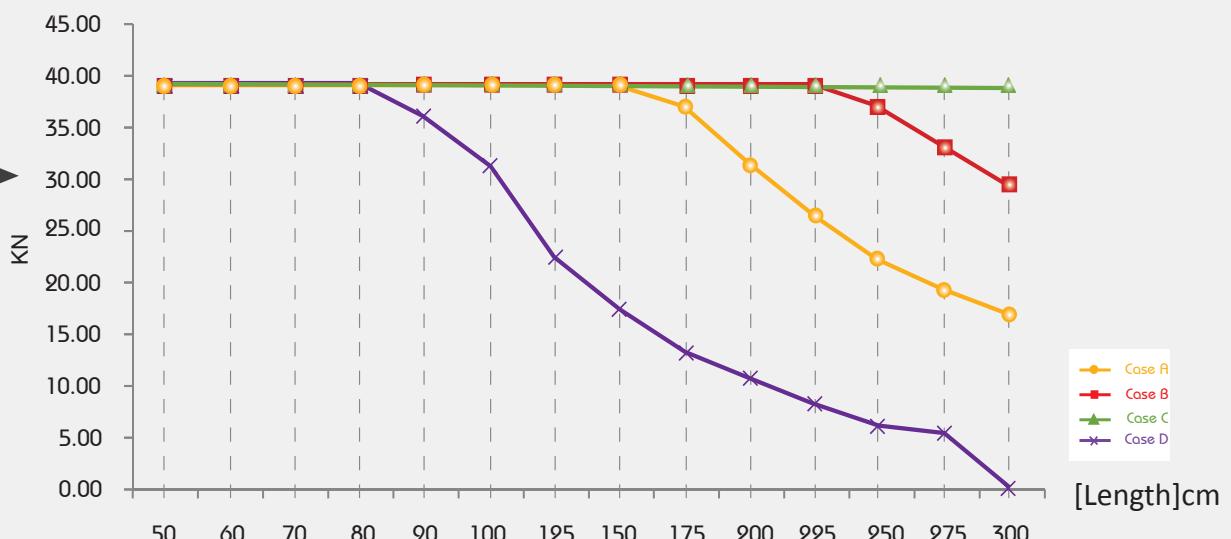


Column Load Data

Span (L) [cm]	Allowable Central Load** [KN]			
	Case A	Case B	Case C	Case D
50	39.00	39.00	39.00	39.00
60	39.00	39.00	39.00	39.00
70	39.00	39.00	39.00	39.00
80	39.00	39.00	39.00	39.00
90	39.00	39.00	39.00	36.00
100	39.00	39.00	39.00	31.00
125	39.00	39.00	39.00	22.00
150	39.00	39.00	39.00	17.00
175	37.00	39.00	39.00	13.00
200	31.00	39.00	39.00	10.00
225	26.00	39.00	39.00	8.00
250	22.00	37.00	39.00	6.00
275	19.00	33.00	39.00	5.00
300	17.00	29.00	39.00	x



Allowable Central **Load



** Given loads are always "allowable characteristic live load"

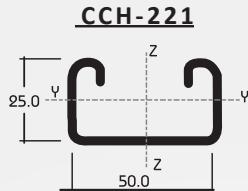
Load table for single beam with uniform (characteristic) Live-Load

This associated data are considered for perforated and non-perforated c-channel types according to DIN 18.800

Thickness	: 2.5 mm
Standard Length	: 3.00 m
Finishes	: Pre-Galvanized, Hot-Dip Galvanized.



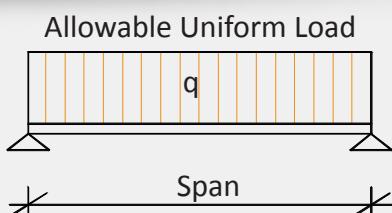
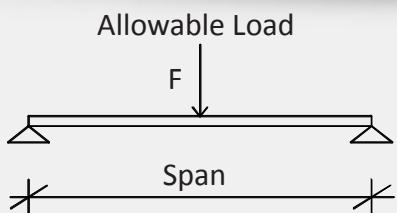
C-Channel:	50 x 25 x 2.5
Area of Shear (A_z)	0.83 cm ²
Moment of Inertia (I_y)	1.78 cm ⁴
Moment of Inertia (I_z)	9.46 cm ⁴
min. Section Modulus (S_y)	1.25 cm ³
Warping Constant (I_w)	58.73 cm ⁶
Torsional Constant (I_t)	0.06 cm ⁴
Plastic Moment cap. ($M_{pl,y}$)	0.41 kNm
Self weight (G)	1.90 kg/m



Chosen Material:	S 235 JRG2
Allowable Bending Stress	21,82 kN/cm ²
Allowable Shear Stress	12,60 kN/cm ²
Modulus of Elasticity	21.000 kN/cm ²

Beam Load Data

Span (L) [cm]	Allowable Load*		Deflection		Uniform Load* @	
	q [kN/m]	F [kN]	U [mm]	[L / X]	q [kN/m]	q [kN/m]
30	12.90	1.90	0.40	750	12.90	12.90
40	7.30	1.50	0.72	560	7.30	7.30
50	4.70	1.20	1.13	440	4.70	4.70
60	3.20	1.00	1.60	380	3.00	3.20
70	2.40	0.80	2.23	310	1.90	2.40
80	1.80	0.72	2.85	280	1.25	1.82
90	1.40	0.63	3.57	250	0.88	1.44
100	1.20	0.60	4.67	210	0.64	1.16
125	0.74	0.46	7.10	180	0.33	0.65
150	0.52	0.39	10.46	140	0.19	0.38
175	0.38	0.33	14.34	120	x	0.24
200	0.29	0.29	18.94	110	x	x
225	0.23	0.26	24.45	90	x	x
250	0.19	0.24	31.28	80	x	x
275	x	x	x	x	x	x
300	x	x	x	x	x	x

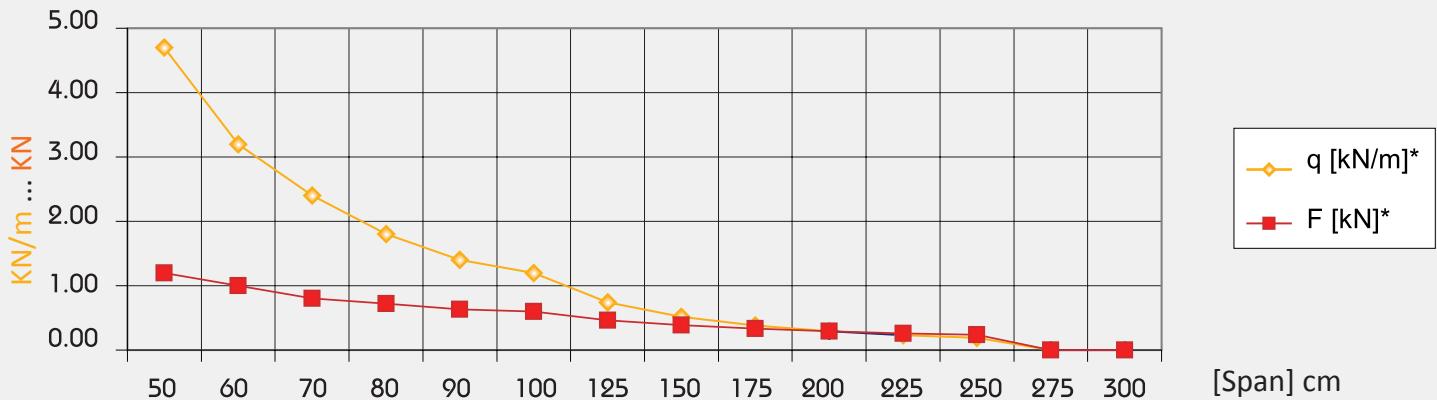


* Given loads are always "allowable characteristic live load"

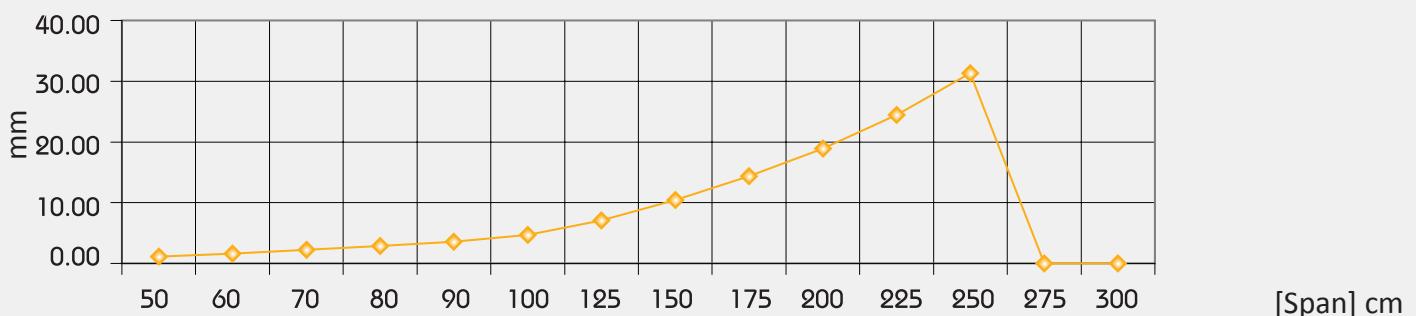
BEAM LOADING GRAPH

CCH-460/461

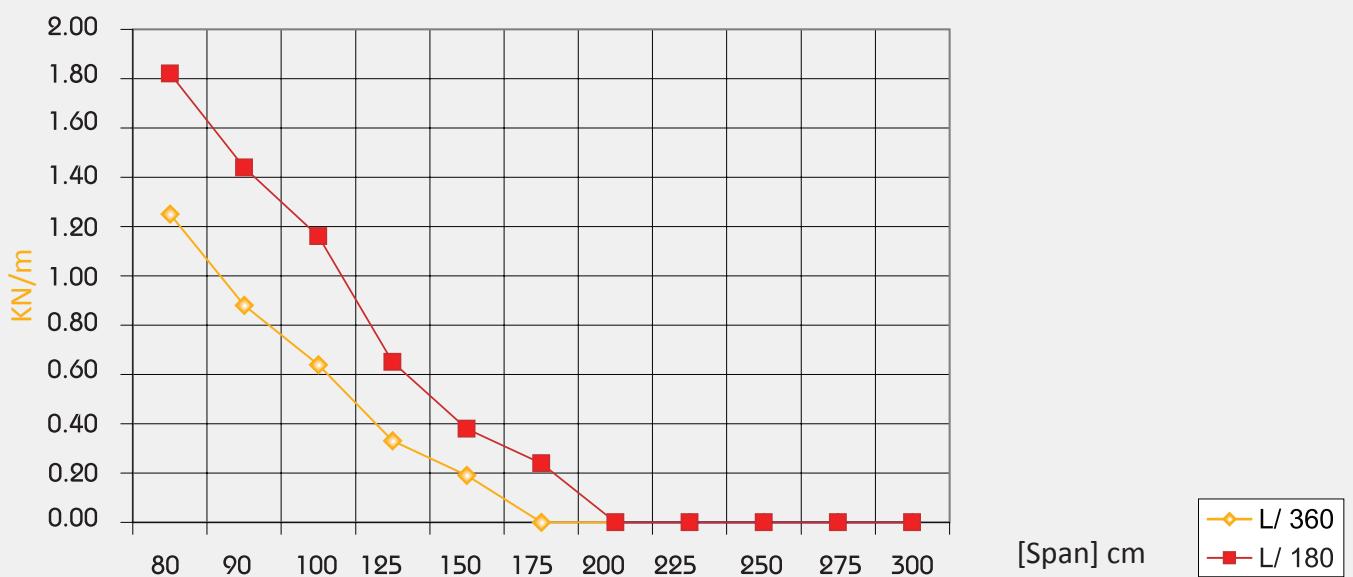
Allowable Loads



Deflection @ Allowable Uniform Load

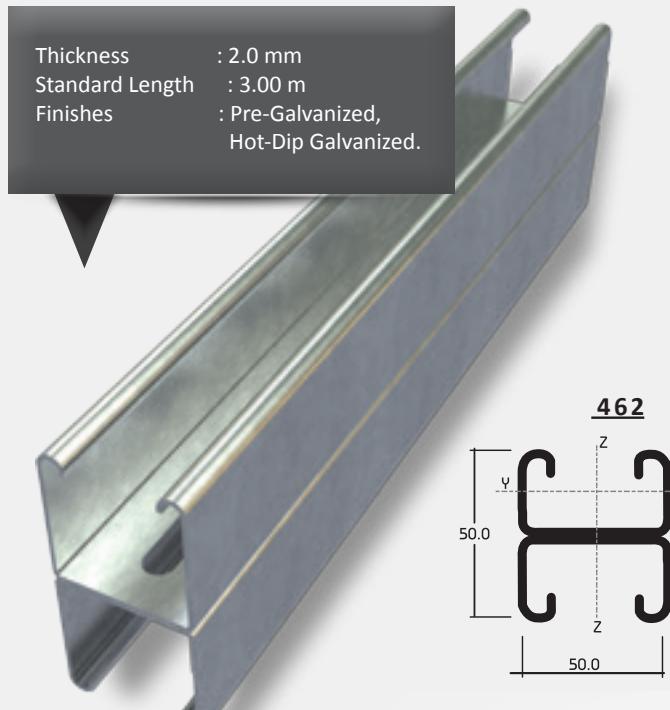


Uniform Load @ Allowable Deflection



Load table for single beam with uniform (characteristic) Live-Load

This associated data are considered for perforated and non-perforated c-channel types according to DIN 18.800

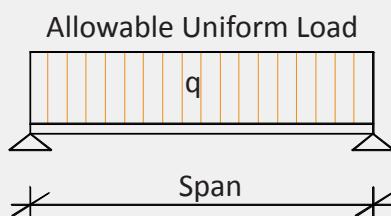
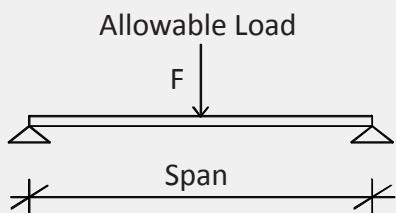


C-Channel:	50 x 25 x 2.0 b2b
Area of Shear (A_z)	1.72 cm ²
Moment of Inertia (I_y)	8.93 cm ⁴
Moment of Inertia (I_z)	18.93 cm ⁴
min. Section Modulus (S_y)	3.57 cm ³
Warping Constant (I_w)	49.43 cm ⁶
Torsional Constant (I_T)	0.11 cm ⁴
Plastic Moment cap. ($M_{pl,y}$)	1.09 kNm
Self weight (G)	3.70 kg/m

Chosen Material:	S 235 JRG2
Allowable Bending Stress	21.28 kN/cm ²
Allowable Shear Stress	12.60 kN/cm ²
Modulus of Elasticity	21.000 kN/cm ²

Beam Load Data

Span (L) [cm]	Allowable Load*		Deflection		Uniform Load* @	
	q [kN/m]	F [kN]	U [mm]	[L / X]	q [kN/m]	q [kN/m]
50	13,30	3,30	0,64	790	13,30	13,30
60	9,20	2,80	0,91	660	9,20	9,20
70	6,80	2,40	1,25	560	6,80	6,80
80	5,20	2,10	1,64	490	5,20	5,20
90	4,10	1,80	2,07	430	4,10	4,10
100	3,30	1,70	2,55	390	3,20	3,30
125	2,10	1,30	3,98	310	1,60	2,10
150	1,50	1,10	5,94	250	0,90	1,50
175	1,10	1,00	8,14	210	0,60	1,10
200	0,80	0,80	10,23	200	0,40	0,80
225	0,66	0,74	13,64	160	0,28	0,56
250	0,53	0,66	16,92	150	0,20	0,41
275	0,44	0,61	20,84	130	x	0,31
300	0,37	0,56	25,18	120	x	0,24

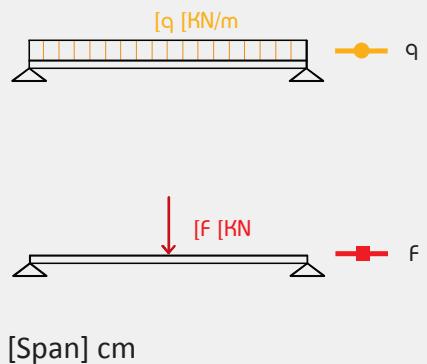
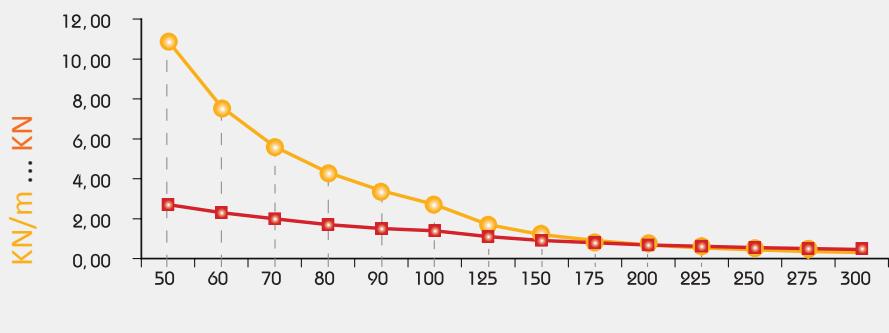


* Given loads are always "allowable characteristic live load"

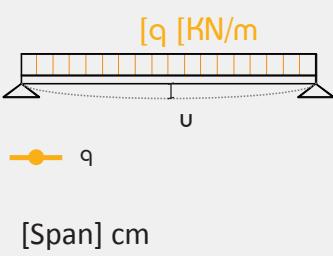
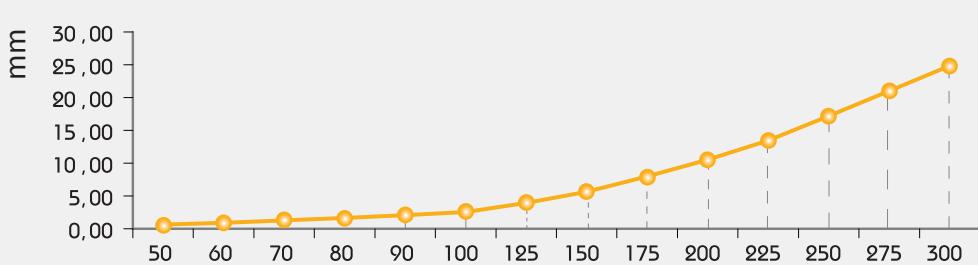
BEAM LOADING GRAPH

CCH-462

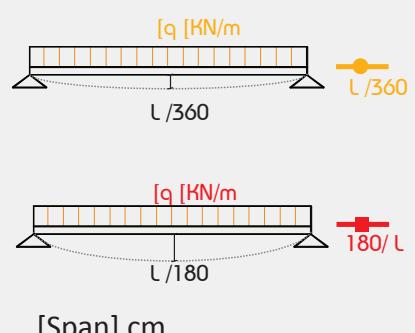
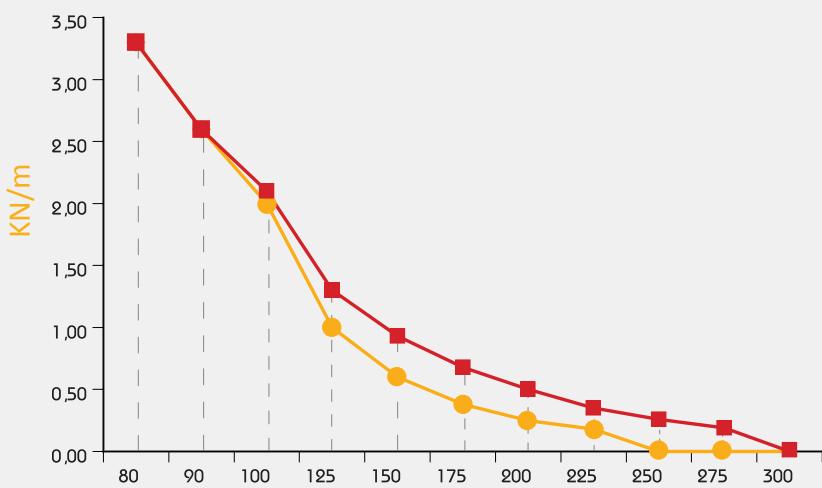
Allowable Loads



Deflection @ Allowable Uniform Load



Uniform Load @ Allowable Deflection



Ordering Codes

SLOTTED CHANNEL

**(41x21)
mm**

Codes	Dimensions	Lenght	Thickness	Materials & Finishes
SC42_F_00041008	41 x 21	3000 mm	1.2 mm	Galvanized
SC42_F_00041012	41 x 21	6000 mm	1.2 mm	Galvanized
SC42_F_00041022	41 x 21	3000 mm	1.35 mm	Galvanized
SC42_F_00041026	41 x 21	6000 mm	1.35 mm	Galvanized
SC42_F_00064699	41 x 21	3000 mm	1.40 mm	Galvanized
SC42_F_00106321	41 x 21	3000 mm	1.50 mm	Galvanized
SC42_F_00041034	41 x 21	6000 mm	1.50 mm	Galvanized
SC42_F_00041058	41 x 21	3000 mm	1.80 mm	Galvanized
SC42_F_00041062	41 x 21	6000 mm	1.80 mm	Galvanized
SC42_F_00105027	41 x 21	3000 mm	2.00 mm	HDG
SC42_F_00064719	41 x 21	3000 mm	2.00 mm	Galvanized
SC42_F_00041094	41 x 21	3000 mm	2.35 mm	Galvanized
SC42_F_00041098	41 x 21	6000 mm	2.35 mm	Galvanized
SC42_F_00054009	41 x 21	3000 mm	2.40 mm	Galvanized
SC42_F_00041102	41 x 21	3000 mm	2.50 mm	Galvanized
SC42_F_00068847	41 x 21	3300 mm	2.50 mm	Galvanized
SC42_F_00068843	41 x 21	4800 mm	2.50 mm	Galvanized
SC42_F_00041106	41 x 21	6000 mm	2.50 mm	Galvanized
SC42_F_00041186	41 x 21	3000 mm	1.20 mm	HDG
SC42_F_00041194	41 x 21	3000 mm	1.35 mm	HDG
SC42_F_00041198	41 x 21	6000 mm	1.35 mm	HDG
SC42_F_00043128	41 x 21	3000 mm	1.40 mm	HDG
SC42_F_00043124	41 x 21	6000 mm	1.40 mm	HDG
SC42_F_00065221	41 x 21	3000 mm	1.50 mm	HDG
SC42_F_00049079	41 x 21	3000 mm	1.80 mm	Black Steel
SC42_F_00041244	41 x 21	3000 mm	1.80 mm	HDG
SC42_F_00041268	41 x 21	3000 mm	2.00 mm	HDG
SC42_F_00053489	41 x 21	3000 mm	2.00 mm	Galvanized
SC42_F_00041272	41 x 21	6000 mm	2.00 mm	HDG
SC42_F_00065965	41 x 21	3000 mm	2.30 mm	HDG
SC42_F_00041310	41 x 21	3000 mm	2.50 mm	HDG
SC42_F_00078019	41 x 21	3000 mm	2.50 mm	Galvanized
SC42_F_00074043	41 x 21	3000 mm	2.00 mm	Galvanized
SC42_F_00074007	41 x 21	3000 mm	1.50 mm	Galvanized
SC42_F_00060481	41 x 21	3000 mm	2.00 mm	Galvanized

**(41x41)
mm**

Codes	Dimensions	Lenght	Thickness	Materials & Finishes
SC44_F_00054013	41 x 41	3000 mm	1.20 mm	Galvanized
SC44_F_00040756	41 x 41	3000 mm	1.35 mm	Galvanized
SC44_F_00040760	41 x 41	6000 mm	1.35 mm	Galvanized
SC44_F_00043104	41 x 41	3000 mm	1.40 mm	Galvanized
SC44_F_00043112	41 x 41	6000 mm	1.40 mm	Galvanized
SC44_F_00040788	41 x 41	3000 mm	1.50 mm	Galvanized

SLOTTED CHANNEL

(41x41)
mm

Codes	Dimensions	Lenght	Thickness	Materials & Finishes
SC44_F_00040792	41 x 41	6000 mm	1.50 mm	Galvanized
SC44_F_00040820	41 x 41	3000 mm	1.80 mm	Galvanized
SC44_F_00040824	41 x 41	6000 mm	1.80 mm	Galvanized
SC44_F_00040852	41 x 41	3000 mm	2.00 mm	Galvanized
SC44_F_00087313	41 x 41	6000 mm	2.00 mm	Galvanized
SC44_F_00040884	41 x 41	3000 mm	2.35 mm	Galvanized
SC44_F_00040896	41 x 41	6000 mm	2.35 mm	Galvanized
SC44_F_00056519	41 x 41	3000 mm	2.40 mm	Galvanized
SC44_F_00040940	41 x 41	3000 mm	2.50 mm	Galvanized
SC44_F_00040952	41 x 41	6000 mm	2.50 mm	Galvanized
SC44_F_00040744	41 x 41	3000 mm	1.20 mm	HDG
SC44_F_00040764	41 x 41	3000 mm	1.35 mm	HDG
SC44_F_00040768	41 x 41	6000 mm	1.35 mm	HDG
SC44_F_00043092	41 x 41	3000 mm	1.40 mm	HDG
SC44_F_00043096	41 x 41	6000 mm	1.40 mm	HDG
SC44_F_00049537	41 x 41	3000 mm	1.50 mm	Black Steel
SC44_F_00040796	41 x 41	3000 mm	1.50 mm	HDG
SC44_F_00040800	41 x 41	6000 mm	1.50 mm	HDG
SC44_F_00049089	41 x 41	3000 mm	1.80 mm	Black Steel
SC44_F_00043076	41 x 41	3000 mm	1.80 mm	HDG
SC44_F_00049551	41 x 41	3000 mm	2.00 mm	Black Steel
SC44_F_00040860	41 x 41	3000 mm	2.00 mm	HDG
SC44_F_00084503	41 x 41	3000 mm	2.00 mm	Galvanized
SC44_F_00053757	41 x 41	3050 mm	2.00 mm	Galvanized
SC44_F_00053761	41 x 41	3150 mm	2.00 mm	Galvanized
SC44_F_00076625	41 x 41	3250 mm	2.00 mm	Galvanized
SC44_F_00053765	41 x 41	3300 mm	2.00 mm	Galvanized
SC44_F_00083681	41 x 41	3350 mm	2.00 mm	Galvanized
SC44_F_00049569	41 x 41	3080 mm	2.00 mm	HDG
SC44_F_00045946	41 x 41	3050 mm	2.00 mm	HDG
SC44_F_00053773	41 x 41	3600 mm	2.00 mm	HDG
SC44_F_00095227	41 x 41	3650 mm	2.00 mm	HDG
SC44_F_00059639	41 x 41	3750 mm	2.00 mm	HDG
SC44_F_00095219	41 x 41	3800 mm	2.00 mm	HDG
SC44_F_00076607	41 x 41	3800 mm	2.00 mm	Galvanized
SC44_F_00085655	41 x 41	3000 mm	2.30 mm	Galvanized
SC44_F_00094751	41 x 41	3000 mm	2.35 mm	HDG
SC44_F_00049047	41 x 41	6000 mm	2.35 mm	Black Steel
SC44_F_00040904	41 x 41	6000 mm	2.35 mm	HDG
SC44_F_00071295	41 x 41	6000 mm	2.35 mm	Galvanized
SC44_F_00081063	41 x 41	3000 mm	2.40 mm	HDG
SC44_F_00100989	41 x 41	6000 mm	2.40 mm	HDG
SC44_F_00049555	41 x 41	3000 mm	2.50 mm	Black Steel
SC44_F_00077185	41 x 41	3000 mm	2.50 mm	HDG
SC44_F_00040980	41 x 41	6000 mm	2.50 mm	HDG
SC44_F_00063965	41 x 41	6000 mm	2.50 mm	Galvanized

Ordering Codes

Codes	Dimensions	Lenght	Thickness	Materials & Finishes
SC44_F_00064225	41 x 41	3000 mm	2.70 mm	HDG
SC44_F_00064317	41 x 41	3000 mm	2.70 mm	Galvanized
SC44_F_00049429	41 x 41	6000 mm	2.70 mm	HDG
SC44_F_00055585	41 x 41	3000 mm	2.00 mm	Galvanized
SC44_F_00055573	41 x 41	6000 mm	2.50 mm	Galvanized
SC44_F_00059597	41 x 41	3000 mm	1.50 mm	Galvanized
SC44_F_00059341	41 x 41	3000 mm	2.00 mm	Galvanized
SC44_F_00048314	41 x 41	3000 mm	2.50 mm	Galvanized

Ordering Codes

SLOTTED CHANNEL

Codes	Dimensions	Lenght	Thickness	Materials & Finishes
SCUC_F_00268249	50x20	3000 mm	1.2 mm	Galvanized
SCUC_F_00268255	50x20	6000 mm	1.2 mm	Galvanized
SCUC_F_00268267	50x20	3000 mm	1.35 mm	Galvanized
SCUC_F_00268261	50x20	6000 mm	1.35 mm	Galvanized
SCUC_F_00268273	50x20	3000 mm	1.40 mm	Galvanized
SCUC_F_00268279	50x20	3000 mm	1.50 mm	Galvanized
SCUC_F_00268285	50x20	6000 mm	1.50 mm	Galvanized
SCUC_F_00268291	50x20	3000 mm	1.80 mm	Galvanized
SCUC_F_00268297	50x20	6000 mm	1.80 mm	Galvanized
SCUC_F_00268303	50x20	3000 mm	2.00 mm	HDG
SCUC_F_00268309	50x20	3000 mm	2.00 mm	Galvanized
SCUC_F_00268315	50x20	3000 mm	2.35 mm	Galvanized
SCUC_F_00268321	50x20	6000 mm	2.35 mm	Galvanized
SCUC_F_00268327	50x20	3000 mm	2.40 mm	Galvanized
SCUC_F_00268333	50x20	3000 mm	2.50 mm	Galvanized
SCUC_F_00268339	50x20	3300 mm	2.50 mm	Galvanized
SCUC_F_00268345	50x20	4800 mm	2.50 mm	Galvanized
SCUC_F_00268351	50x20	6000 mm	2.50 mm	Galvanized
SCUC_F_00268909	50x20	3000 mm	1.20 mm	HDG
n/a	50x20	3000 mm	1.35 mm	HDG
n/a	50x20	6000 mm	1.35 mm	HDG
SCUC_F_00268915	50x20	3000 mm	1.40 mm	HDG
SCUC_F_00268921	50x20	6000 mm	1.40 mm	HDG
SCUC_F_00268927	50x20	3000 mm	1.50 mm	HDG
SCUC_F_00268933	50x20	3000 mm	1.80 mm	Black Steel
SCUC_F_00268939	50x20	3000 mm	1.80 mm	HDG
SCUC_F_00268945	50x20	3000 mm	2.00 mm	HDG
SCUC_F_00268309	50x20	3000 mm	2.00 mm	Galvanized
SCUC_F_00268957	50x20	6000 mm	2.00 mm	HDG
SCUC_F_00268963	50x20	3000 mm	2.30 mm	HDG
SCUC_F_00268969	50x20	3000 mm	2.50 mm	HDG
SCUC_F_00268333	50x20	3000 mm	2.50 mm	Galvanized
SCUC_F_00268309	50x20	3000 mm	2.00 mm	Galvanized
SCUC_F_00268279	50x20	3000 mm	1.50 mm	Galvanized
SCUC_F_00268309	50x20	3000 mm	2.00 mm	Galvanized

(50x20)
mm

SLOTTED CHANNEL

(50x25)
mm

Codes	Dimensions	Lenght	Thickness	Materials & Finishes
SCUC_F_00268975	50x25	3000 mm	1.2 mm	Galvanized
SCUC_F_00268981	50x25	6000 mm	1.2 mm	Galvanized
SCUC_F_00270347	50x25	3000 mm	1.35 mm	Galvanized
SCUC_F_00270353	50x25	6000 mm	1.35 mm	Galvanized
SCUC_F_00268987	50x25	3000 mm	1.40 mm	Galvanized
SCUC_F_00268993	50x25	3000 mm	1.50 mm	Galvanized
SCUC_F_00268999	50x25	6000 mm	1.50 mm	Galvanized
SCUC_F_00269005	50x25	3000 mm	1.80 mm	Galvanized
SCUC_F_00269011	50x25	6000 mm	1.80 mm	Galvanized
SCUC_F_00269017	50x25	3000 mm	2.00 mm	HDG
SCUC_F_00269023	50x25	3000 mm	2.00 mm	Galvanized
SCUC_F_00269037	50x25	3000 mm	2.35 mm	Galvanized
SCUC_F_00269043	50x25	6000 mm	2.35 mm	Galvanized
SCUC_F_00269049	50x25	3000 mm	2.40 mm	Galvanized
SCUC_F_00269055	50x25	3000 mm	2.50 mm	Galvanized
SCUC_F_00269061	50x25	3300 mm	2.50 mm	Galvanized
SCUC_F_00269067	50x25	4800 mm	2.50 mm	Galvanized
SCUC_F_00269079	50x25	6000 mm	2.50 mm	Galvanized
SCUC_F_00269093	50x25	3000 mm	1.20 mm	HDG
n/a	50x25	3000 mm	1.35 mm	HDG
n/a	50x25	6000 mm	1.35 mm	HDG
SCUC_F_00269099	50x25	3000 mm	1.40 mm	HDG
SCUC_F_00269105	50x25	6000 mm	1.40 mm	HDG
SCUC_F_00269111	50x25	3000 mm	1.50 mm	HDG
SCUC_F_00269117	50x25	3000 mm	1.80 mm	Black Steel
SCUC_F_00269123	50x25	3000 mm	1.80 mm	HDG
SCUC_F_00269017	50x25	3000 mm	2.00 mm	HDG
SCUC_F_00269023	50x25	3000 mm	2.00 mm	Galvanized
SCUC_F_00269129	50x25	6000 mm	2.00 mm	HDG
SCUC_F_00269135	50x25	3000 mm	2.30 mm	HDG
SCUC_F_00269141	50x25	3000 mm	2.50 mm	HDG
SCUC_F_00269055	50x25	3000 mm	2.50 mm	Galvanized
SCUC_F_00269023	50x25	3000 mm	2.00 mm	Galvanized
SCUC_F_00268993	50x25	3000 mm	1.50 mm	Galvanized
SCUC_F_00269023	50x25	3000 mm	2.00 mm	Galvanized

Ordering Codes

PLAIN CHANNEL

(41x21)
mm

Codes	Dimensions	Lenght	Thickness	Materials & Finishes
SC42_F_00041110	41 x 21	3000 mm	1.20 mm	Galvanized
SC42_F_00041114	41 x 21	6000 mm	1.20 mm	Galvanized
SC42_F_00041118	41 x 21	3000 mm	1.35 mm	Galvanized
SC42_F_00041122	41 x 21	6000 mm	1.35 mm	Galvanized
SC42_F_00043148	41 x 21	3000 mm	1.40 mm	Galvanized
SC42_F_00043152	41 x 21	6000 mm	1.40 mm	Galvanized
SC42_F_00041126	41 x 21	3000 mm	1.50 mm	Galvanized
SC42_F_00041130	41 x 21	6000 mm	1.50 mm	Galvanized
SC42_F_00041154	41 x 21	3000 mm	1.80 mm	Galvanized
SC42_F_00041158	41 x 21	6000 mm	1.80 mm	Galvanized
SC42_F_00041162	41 x 21	3000 mm	2.00 mm	Galvanized
SC42_F_00041166	41 x 21	6000 mm	2.00 mm	Galvanized
SC42_F_00041170	41 x 21	3000 mm	2.35 mm	Galvanized
SC42_F_00041174	41 x 21	6000 mm	2.35 mm	Galvanized
SC42_F_00041178	41 x 21	3000 mm	2.50 mm	Galvanized
SC42_F_00041182	41 x 21	6000 mm	2.50 mm	Galvanized
SC42_F_00041190	41 x 21	3000 mm	1.20 mm	HDG
SC42_F_00041212	41 x 21	3000 mm	1.35 mm	HDG
SC42_F_00041216	41 x 21	6000 mm	1.35 mm	HDG
SC42_F_00043132	41 x 21	3000 mm	1.40 mm	HDG
SC42_F_00043116	41 x 21	6000 mm	1.40 mm	HDG
SC42_F_00041228	41 x 21	3000 mm	1.50 mm	HDG
SC42_F_00041238	41 x 21	6000 mm	1.50 mm	HDG
SC42_F_00041252	41 x 21	3000 mm	1.80 mm	HDG
SC42_F_00041264	41 x 21	6000 mm	1.80 mm	HDG
SC42_F_00041278	41 x 21	3000 mm	2.00 mm	HDG
SC42_F_00067931	41 x 21	3000 mm	2.00 mm	Galvanized
SC42_F_00041282	41 x 21	6000 mm	2.00 mm	HDG
SC42_F_00048938	41 x 21	6000 mm	2.00 mm	Galvanized
SC42_F_00041294	41 x 21	3000 mm	2.35 mm	HDG
SC42_F_00074871	41 x 21	3000 mm	2.35 mm	Galvanized
SC42_F_00041298	41 x 21	6000 mm	2.35 mm	HDG
SC42_F_00041318	41 x 21	3000 mm	2.50 mm	HDG
SC42_F_00067761	41 x 21	5000 mm	2.50 mm	Galvanized
SC42_F_00041322	41 x 21	6000 mm	2.50 mm	HDG

HDG : Hot-dip Galvanized

PLAIN CHANNEL

(41x41)
mm

Codes	Dimensions	Lenght	Thickness	Materials & Finishes
SC42_F_00041110	41 x 21	3000 mm	1.20 mm	Galvanized
SC42_F_00041114	41 x 21	6000 mm	1.20 mm	Galvanized
SC42_F_00041118	41 x 21	3000 mm	1.35 mm	Galvanized
SC42_F_00041122	41 x 21	6000 mm	1.35 mm	Galvanized
SC42_F_00043148	41 x 21	3000 mm	1.40 mm	Galvanized
SC42_F_00043152	41 x 21	6000 mm	1.40 mm	Galvanized
SC42_F_00041126	41 x 21	3000 mm	1.50 mm	Galvanized
SC42_F_00041130	41 x 21	6000 mm	1.50 mm	Galvanized
SC42_F_00041154	41 x 21	3000 mm	1.80 mm	Galvanized
SC42_F_00041158	41 x 21	6000 mm	1.80 mm	Galvanized
SC42_F_00041162	41 x 21	3000 mm	2.00 mm	Galvanized
SC42_F_00041166	41 x 21	6000 mm	2.00 mm	Galvanized
SC42_F_00041170	41 x 21	3000 mm	2.35 mm	Galvanized
SC42_F_00041174	41 x 21	6000 mm	2.35 mm	Galvanized
SC42_F_00041178	41 x 21	3000 mm	2.50 mm	Galvanized
SC42_F_00041182	41 x 21	6000 mm	2.50 mm	Galvanized
SC42_F_00041190	41 x 21	3000 mm	1.20 mm	HDG
SC42_F_00041212	41 x 21	3000 mm	1.35 mm	HDG
SC42_F_00041216	41 x 21	6000 mm	1.35 mm	HDG
SC42_F_00043132	41 x 21	3000 mm	1.40 mm	HDG
SC42_F_00043116	41 x 21	6000 mm	1.40 mm	HDG
SC42_F_00041228	41 x 21	3000 mm	1.50 mm	HDG
SC42_F_00041238	41 x 21	6000 mm	1.50 mm	HDG
SC42_F_00041252	41 x 21	3000 mm	1.80 mm	HDG
SC42_F_00041264	41 x 21	6000 mm	1.80 mm	HDG
SC42_F_00041278	41 x 21	3000 mm	2.00 mm	HDG
SC42_F_00067931	41 x 21	3000 mm	2.00 mm	Galvanized
SC42_F_00041282	41 x 21	6000 mm	2.00 mm	HDG
SC42_F_00048938	41 x 21	6000 mm	2.00 mm	Galvanized
SC42_F_00041294	41 x 21	3000 mm	2.35 mm	HDG
SC42_F_00074871	41 x 21	3000 mm	2.35 mm	Galvanized
SC42_F_00041298	41 x 21	6000 mm	2.35 mm	HDG
SC42_F_00041318	41 x 21	3000 mm	2.50 mm	HDG
SC42_F_00067761	41 x 21	5000 mm	2.50 mm	Galvanized
SC42_F_00041322	41 x 21	6000 mm	2.50 mm	HDG

HDG : Hot-dip Galvanized

Ordering Codes

PLAIN CHANNEL

(50x20)
mm

Codes	Dimensions	Lenght	Thickness	Materials & Finishes
SCUC_F_00269147	50x20	3000 mm	1.20 mm	Galvanized
SCUC_F_00269153	50x20	6000 mm	1.20 mm	Galvanized
SCUC_F_00270359	50x20	3000 mm	1.35 mm	Galvanized
SCUC_F_00270365	50x20	6000 mm	1.35 mm	Galvanized
SCUC_F_00269159	50x20	3000 mm	1.40 mm	Galvanized
SCUC_F_00269165	50x20	6000 mm	1.40 mm	Galvanized
SCUC_F_00269171	50x20	3000 mm	1.50 mm	Galvanized
SCUC_F_00269177	50x20	6000 mm	1.50 mm	Galvanized
SCUC_F_00269183	50x20	3000 mm	1.80 mm	Galvanized
SCUC_F_00269189	50x20	6000 mm	1.80 mm	Galvanized
SCUC_F_00269195	50x20	3000 mm	2.00 mm	Galvanized
SCUC_F_00269201	50x20	6000 mm	2.00 mm	Galvanized
SCUC_F_00269207	50x20	3000 mm	2.35 mm	Galvanized
SCUC_F_00269213	50x20	6000 mm	2.35 mm	Galvanized
SCUC_F_00269219	50x20	3000 mm	2.50 mm	Galvanized
SCUC_F_00269225	50x20	6000 mm	2.50 mm	Galvanized
SCUC_F_00269231	50x20	3000 mm	1.20 mm	HDG
n/a	50x20	3000 mm	1.35 mm	HDG
n/a	50x20	6000 mm	1.35 mm	HDG
SCUC_F_00269237	50x20	3000 mm	1.40 mm	HDG
SCUC_F_00269243	50x20	6000 mm	1.40 mm	HDG
SCUC_F_00269249	50x20	3000 mm	1.50 mm	HDG
SCUC_F_00269255	50x20	6000 mm	1.50 mm	HDG
SCUC_F_00269261	50x20	3000 mm	1.80 mm	HDG
SCUC_F_00269267	50x20	6000 mm	1.80 mm	HDG
SCUC_F_00269273	50x20	3000 mm	2.00 mm	HDG
SCUC_F_00269195	50x20	3000 mm	2.00 mm	Galvanized
SCUC_F_00269279	50x20	6000 mm	2.00 mm	HDG
SCUC_F_00269201	50x20	6000 mm	2.00 mm	Galvanized
SCUC_F_00269285	50x20	3000 mm	2.35 mm	HDG
SCUC_F_00269207	50x20	3000 mm	2.35 mm	Galvanized
SCUC_F_00269291	50x20	6000 mm	2.35 mm	HDG
SCUC_F_00269297	50x20	3000 mm	2.50 mm	HDG
SCUC_F_00269303	50x20	5000 mm	2.50 mm	Galvanized
SCUC_F_00269309	50x20	6000 mm	2.50 mm	HDG

HDG : Hot-dip Galvanized

Ordering Codes

PLAIN CHANNEL

Codes	Dimensions	Lenght	Thickness	Materials & Finishes
SCUC_F_00269327	50x25	3000 mm	1.20 mm	Galvanized
SCUC_F_00269333	50x25	6000 mm	1.20 mm	Galvanized
SCUC_F_00270371	50x25	3000 mm	1.35 mm	Galvanized
SCUC_F_00270377	50x25	6000 mm	1.35 mm	Galvanized
SCUC_F_00269339	50x25	3000 mm	1.40 mm	Galvanized
SCUC_F_00269345	50x25	6000 mm	1.40 mm	Galvanized
SCUC_F_00269351	50x25	3000 mm	1.50 mm	Galvanized
SCUC_F_00269357	50x25	6000 mm	1.50 mm	Galvanized
SCUC_F_00269363	50x25	3000 mm	1.80 mm	Galvanized
SCUC_F_00269369	50x25	6000 mm	1.80 mm	Galvanized
SCUC_F_00269375	50x25	3000 mm	2.00 mm	Galvanized
SCUC_F_00269381	50x25	6000 mm	2.00 mm	Galvanized
SCUC_F_00269387	50x25	3000 mm	2.35 mm	Galvanized
SCUC_F_00269393	50x25	6000 mm	2.35 mm	Galvanized
SCUC_F_00269399	50x25	3000 mm	2.50 mm	Galvanized
SCUC_F_00269405	50x25	6000 mm	2.50 mm	Galvanized
SCUC_F_00269411	50x25	3000 mm	1.20 mm	HDG
n/a	50x25	3000 mm	1.35 mm	HDG
n/a	50x25	6000 mm	1.35 mm	HDG
SCUC_F_00269417	50x25	3000 mm	1.40 mm	HDG
SCUC_F_00269423	50x25	6000 mm	1.40 mm	HDG
SCUC_F_00269429	50x25	3000 mm	1.50 mm	HDG
SCUC_F_00269435	50x25	6000 mm	1.50 mm	HDG
SCUC_F_00269441	50x25	3000 mm	1.80 mm	HDG
SCUC_F_00269447	50x25	6000 mm	1.80 mm	HDG
SCUC_F_00269453	50x25	3000 mm	2.00 mm	HDG
SCUC_F_00269375	50x25	3000 mm	2.00 mm	Galvanized
SCUC_F_00269459	50x25	6000 mm	2.00 mm	HDG
SCUC_F_00269381	50x25	6000 mm	2.00 mm	Galvanized
SCUC_F_00269465	50x25	3000 mm	2.35 mm	HDG
SCUC_F_00269387	50x25	3000 mm	2.35 mm	Galvanized
SCUC_F_00269471	50x25	6000 mm	2.35 mm	HDG
SCUC_F_00269477	50x25	3000 mm	2.50 mm	HDG
SCUC_F_00269483	50x25	5000 mm	2.50 mm	Galvanized
SCUC_F_00269489	50x25	6000 mm	2.50 mm	HDG

HDG : Hot-dip Galvanized

(50x25)
mm

Ordering Codes

B2B SLOTTED CHANNEL

(41x41)
mm

Codes	Dimensions	Lenght	Thickness	Materials & Finishes
GNA_F_00064403	41 x 41	3000 mm	2.70 mm	HDG
GNA_F_00064415	41 x 41	3100 mm	2.70 mm	HDG
GNA_F_00064431	41 x 41	3170 mm	2.70 mm	HDG
GNA_F_00064435	41 x 41	3200 mm	2.70 mm	HDG
GNA_F_00064443	41 x 41	3450 mm	2.70 mm	HDG
GNA_F_00064395	41 x 41	3600 mm	2.70 mm	HDG
GNA_F_00064439	41 x 41	4200 mm	2.70 mm	HDG
GNA_F_00078023	41 x 42	3000 mm	2.50 mm	HDG

(50x20)
mm

Codes	Dimensions	Lenght	Thickness	Materials & Finishes
GNA_F_00270111	50x20	3000 mm	2.70 mm	HDG
GNA_F_00270115	50x20	3100 mm	2.70 mm	HDG
GNA_F_00270119	50x20	3170 mm	2.70 mm	HDG
GNA_F_00270123	50x20	3200 mm	2.70 mm	HDG
GNA_F_00270127	50x20	3450 mm	2.70 mm	HDG
GNA_F_00270131	50x20	3600 mm	2.70 mm	HDG
GNA_F_00270135	50x20	4200 mm	2.70 mm	HDG
GNA_F_00252131	50x20	3000 mm	2.50 mm	HDG

(50x25)
mm

Codes	Dimensions	Lenght	Thickness	Materials & Finishes
GNA_F_00270139	50x25	3000 mm	2.70 mm	HDG
GNA_F_00270143	50x25	3100 mm	2.70 mm	HDG
GNA_F_00270147	50x25	3170 mm	2.70 mm	HDG
GNA_F_00270151	50x25	3200 mm	2.70 mm	HDG
GNA_F_00270155	50x25	3450 mm	2.70 mm	HDG
GNA_F_00270159	50x25	3600 mm	2.70 mm	HDG
GNA_F_00270163	50x25	4200 mm	2.70 mm	HDG
GNA_F_00252131	50x25	3000 mm	2.50 mm	HDG

Ordering Codes

B2B SLOTTED CHANNEL

(41x82)
mm

Codes	Dimensions	Lenght	Thickness	Materials & Finishes
GNA_F_00086833	41 x 82	3000 mm	2.30 mm	HDG
GNA_F_00065183	41 x 82	3000 mm	2.50 mm	HDG
GNA_F_00049613	41 x 82	3350 mm	2.50 mm	HDG
GNA_F_00083685	41 x 82	3350 mm	2.00 mm	HDG
GNA_F_00049581	41 x 82	3380 mm	2.00 mm	HDG
GNA_F_00053797	41 x 82	3500 mm	2.50 mm	HDG
GNA_F_00053801	41 x 82	4000 mm	2.50 mm	HDG
GNA_F_00049589	41 x 82	4000 mm	2.00 mm	HDG
GNA_F_00053805	41 x 82	4300 mm	2.50 mm	HDG
GNA_F_00053817	41 x 82	4500 mm	2.50 mm	HDG
GNA_F_00049645	41 x 82	450 mm	2.50 mm	HDG
GNA_F_00104449	41 x 82	700 mm	2.50 mm	HDG
GNA_F_00043468	41 x 82	3000 mm	1.50 mm	HDG
GNA_F_00043456	41 x 82	3000 mm	1.80 mm	HDG
GNA_F_00077197	41 x 82	3000 mm	2.35 mm	HDG
GNA_F_00043444	41 x 82	3000 mm	2.00 mm	HDG
GNA_F_00102261	41 x 82	3500 mm	1.80 mm	HDG
GNA_F_00102265	41 x 82	3550 mm	1.80 mm	HDG
GNA_F_00102269	41 x 82	3560 mm	1.80 mm	HDG
GNA_F_00081537	41 x 82	3750 mm	2.00 mm	HDG
GNA_F_00102273	41 x 82	4750 mm	1.80 mm	HDG
GNA_F_00043950	41 x 82	6000 mm	1.50 mm	HDG
GNA_F_00043934	41 x 82	6000 mm	1.80 mm	HDG
GNA_F_00055459	41 x 82	6000 mm	2.30 mm	HDG
GNA_F_00043920	41 x 82	6000 mm	2.50 mm	HDG
GNA_F_00043924	41 x 82	6000 mm	2.00 mm	HDG
GNA_F_00043496	41 x 82	3000 mm	2.50 mm	HDG
GNA_F_00049187	41 x 82	3000 mm	1.80 mm	Galvanized
GNA_F_00049051	41 x 82	3000 mm	2.35 mm	Galvanized
GNA_F_00077769	41 x 82	300 mm	2.50 mm	Galvanized
GNA_F_00071299	41 x 82	6000 mm	2.35 mm	Galvanized
GNA_F_00071291	41 x 82	6000 mm	2.30 mm	Galvanized

B2B PLAIN CHANNEL

(41x82)
mm

Codes	Dimensions	Lenght	Thickness	Materials & Finishes
GNA_F_00043508	41 x 82	3000 mm	2.50 mm	HDG
GNA_F_00043520	41 x 82	3000 mm	2.50 mm	HDG
GNA_F_00044110	41 x 82	6000 mm	1.50 mm	HDG
GNA_F_00095549	41 x 82	6000 mm	1.80 mm	HDG
GNA_F_00043996	41 x 82	6000 mm	2.50 mm	HDG
GNA_F_00044048	41 x 82	6000 mm	2.00 mm	HDG
GNA_F_00095533	41 x 82	3000 mm	1.50 mm	HDG
GNA_F_00043900	41 x 82	3000 mm	1.80 mm	HDG
GNA_F_00043524	41 x 82	3000 mm	2.00 mm	HDG
GNA_F_00104487	41 x 82	3500 mm	1.80 mm	HDG
GNA_F_00054213	41 x 82	3000 mm	2.50 mm	HDG

HDG : Hot-dip Galvanized

(50x20)
mm

Codes	Dimensions	Lenght	Thickness	Materials & Finishes
GNA_F_00270221	50x20	3000 mm	2.50 mm	HDG
GNA_F_00270221	50x20	3000 mm	2.50 mm	HDG
GNA_F_00270225	50x20	6000 mm	1.50 mm	HDG
GNA_F_00270229	50x20	6000 mm	1.80 mm	HDG
GNA_F_00270233	50x20	6000 mm	2.50 mm	HDG
GNA_F_00270237	50x20	6000 mm	2.00 mm	HDG
GNA_F_00270241	50x20	3000 mm	1.50 mm	HDG
GNA_F_00270245	50x20	3000 mm	1.80 mm	HDG
GNA_F_00270249	50x20	3000 mm	2.00 mm	HDG
GNA_F_00270253	50x20	3500 mm	1.80 mm	HDG
GNA_F_00270221	50x20	3000 mm	2.50 mm	HDG

HDG : Hot-dip Galvanized

(50x25)
mm

Codes	Dimensions	Lenght	Thickness	Materials & Finishes
GNA_F_00270311	50x25	3000 mm	2.50 mm	HDG
GNA_F_00270311	50x25	3000 mm	2.50 mm	HDG
GNA_F_00270315	50x25	6000 mm	1.50 mm	HDG
GNA_F_00270319	50x25	6000 mm	1.80 mm	HDG
GNA_F_00270323	50x25	6000 mm	2.50 mm	HDG
GNA_F_00270327	50x25	6000 mm	2.00 mm	HDG
GNA_F_00270331	50x25	3000 mm	1.50 mm	HDG
GNA_F_00270335	50x25	3000 mm	1.80 mm	HDG
GNA_F_00270339	50x25	3000 mm	2.00 mm	HDG
GNA_F_00270343	50x25	3500 mm	1.80 mm	HDG
GNA_F_00270311	50x25	3000 mm	2.50 mm	HDG

HDG : Hot-dip Galvanized



Toothed channels provide shock-resistant fixing
for non-slip connections and higher safety
requirements.
To make fitting easier, the locking plates and
T-head bolts should be pre-mounted on the
fittings to be attached.

TOOTHED CHANNELS



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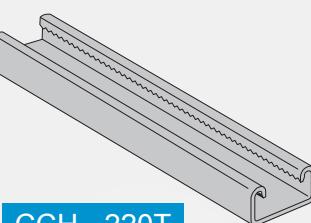
TOOTHED CHANNEL

CCH-220T/221T (41x21x1.5)

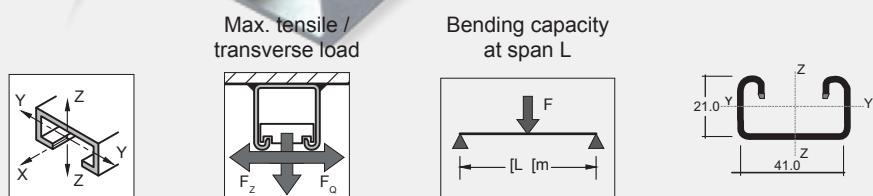
Thickness : 1.5 mm
 Standard Length : 3.00 m
 Finishes : Pre-Galvanized,
 Hot-Dip Galvanized.



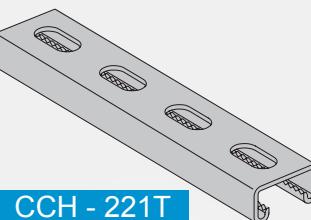
Due to its positive locking feature, this channel is ideally suited when increased loading capacities in longitudinal direction are required



CCH - 220T



Channel CCH	Channel Weight G [Kg/m]	Cross Section A [cm ²]	Moment of inertia		Section modulus		Bending capacity at span L		
			I _y [cm ⁴]	I _z [cm ⁴]	W _y [cm ³]	W _z [cm ³]	m 0.50	m 1.00	m 1.50
			[F [KN]						
220T	1.09	1.39	0.81	3.36	0.64	1.91	1.12	0.56	0.19
221T	0.97	1.23	0.70	3.34	0.60	1.70	1.04	0.52	0.17
222T	1.94	2.47	3.55	6.69	1.69	3.82	2.94	1.47	0.49



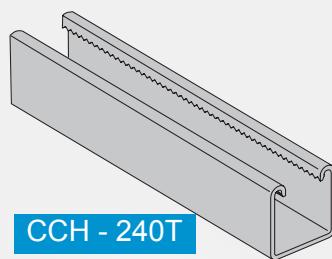
CCH - 221T

CCH-240T/241T (41x41x1.5)

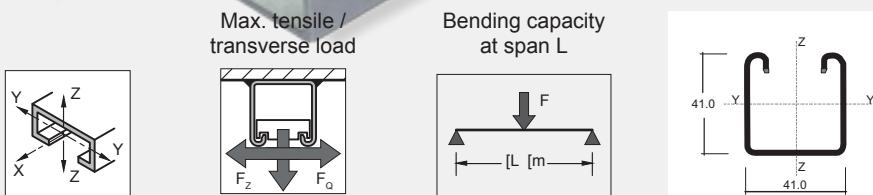
Thickness : 1.5 mm
 Standard Length : 3.00 m
 Finishes : Pre-Galvanized,
 Hot-Dip Galvanized.



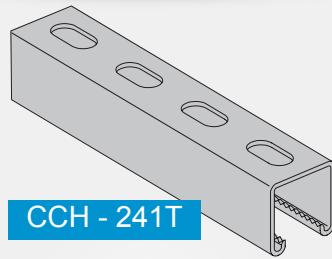
Due to its positive locking feature, this channel is ideally suited when increased loading capacities in longitudinal direction are required



CCH - 240T



Channel CCH	Channel Weight G [Kg/m]	Cross Section A [cm ²]	Moment of inertia		Section modulus		Bending capacity at span L		
			I _y [cm ⁴]	I _z [cm ⁴]	W _y [cm ³]	W _z [cm ³]	m 0.50	m 1.00	m 1.50
			[F [KN]						
240T	1.56	1.99	4.36	5.70	1.86	2.99	3.24	1.62	1.08
241T	1.44	1.83	3.87	5.68	1.76	2.66	3.06	1.53	1.02
242T	2.88	3.67	21.11	11.37	5.15	5.98	8.98	4.49	2.90



CCH - 241T

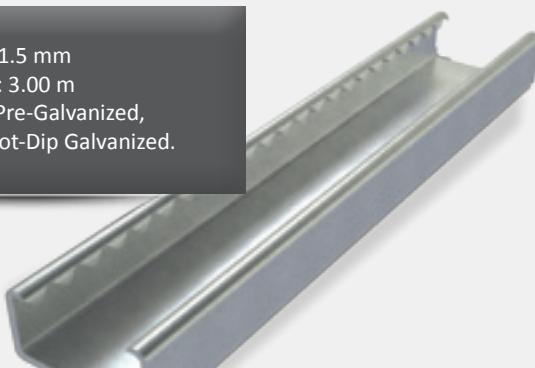


CCH - 242T

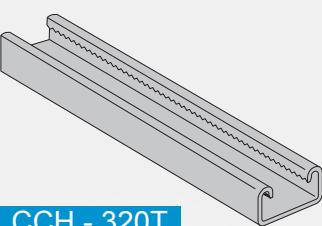
TOOTHED CHANNEL

CCH-320T/321T (41x21x2.0)

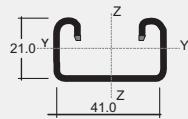
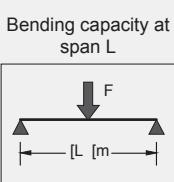
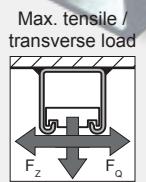
Thickness : 1.5 mm
 Standard Length : 3.00 m
 Finishes : Pre-Galvanized,
 Hot-Dip Galvanized.



Due to its positive locking feature, this channel is ideally suited when increased loading capacities in longitudinal direction are required



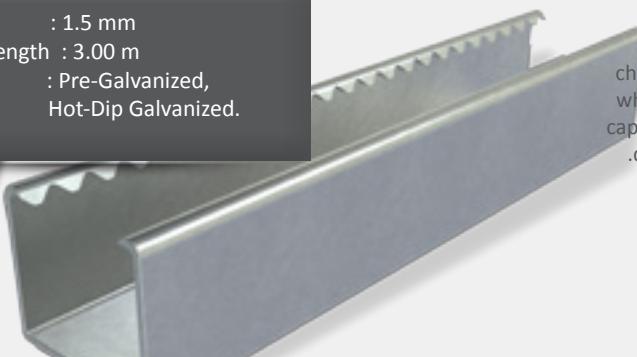
CCH - 320T



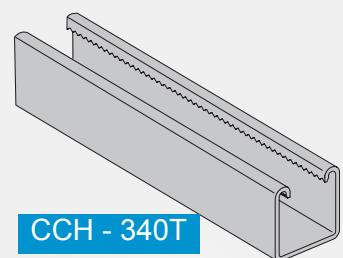
Channel CCH	Channel Weight G [Kg/m]	Cross Section A [cm²]	Moment of inertia		Section modulus		Bending capacity at span L		
			I_y [cm⁴]	I_z [cm⁴]	W_y [cm³]	W_z [cm³]	m 0.50	m 1.00	m 1.50
									[F [KN]]
320T	1.44	1.83	0.99	4.77	0.84	2.37	1.46	0.73	0.24
321T	1.27	1.62	0.88	4.25	0.75	2.11	1.30	0.65	0.22
322T	2.54	3.24	4.60	8.51	2.19	4.74	3.80	1.91	1.27

CCH-340T/341T (41x41x2.0)

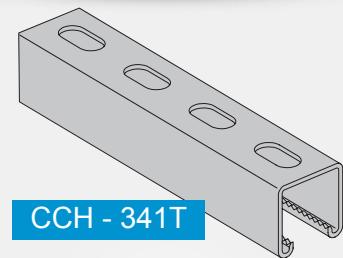
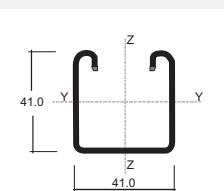
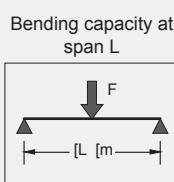
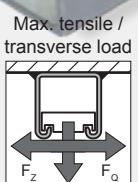
Thickness : 1.5 mm
 Standard Length : 3.00 m
 Finishes : Pre-Galvanized,
 Hot-Dip Galvanized.



Due to its positive locking feature, this channel is ideally suited when increased loading capacities in longitudinal direction are required

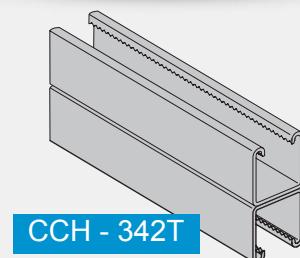


CCH - 340T



CCH - 341T

Channel CCH	Channel Weight G [Kg/m]	Cross Section A [cm²]	Moment of inertia		Section modulus		Bending capacity at span L		
			I_y [cm⁴]	I_z [cm⁴]	W_y [cm³]	W_z [cm³]	m 0.50	m 1.00	m 1.50
									[F [KN]]
340T	2.04	2.60	5.41	7.03	2.35	3.86	4.10	2.05	1.37
341T	1.83	2.33	4.59	6.99	2.18	3.43	3.80	1.90	1.26
342T	3.76	4.79	26.81	14.04	6.62	7.72	11.54	5.77	3.85

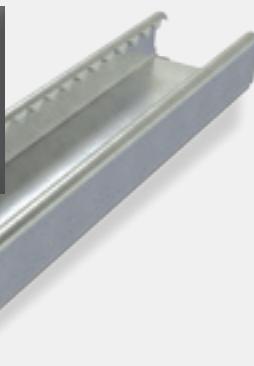


CCH - 342T

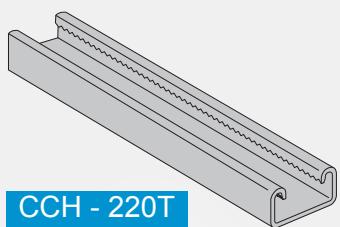
TOOTHED CHANNEL

CCH-420T/421T (41x21x2.5)

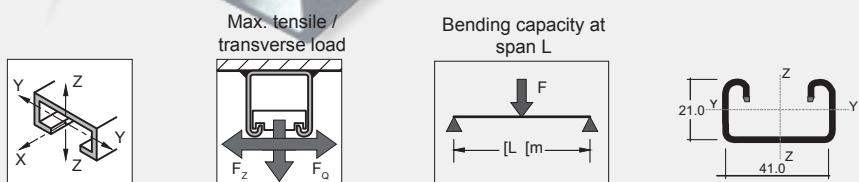
Thickness : 2.5 mm
Standard Length : 3.00 m
Finishes : Pre-Galvanized,
Hot-Dip Galvanized.



Due to its positive locking feature, this channel is ideally suited when increased loading capacities in longitudinal direction are required



CCH - 220T

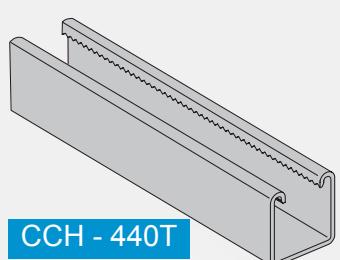


Channel CCH	Channel Weight G [Kg/m]	Cross Section A [cm²]	Moment of inertia I_y [cm⁴]	I_z [cm⁴]	Section modulus W_y [cm³]	W_z [cm³]	Bending capacity at span L		
							m 0.50	m 1.00	m 1.50
							[F [KN]		
420T	1.75	2.18	1.15	4.92	0.89	2.50	1.55	0.78	0.32
421T	1.54	1.95	1.01	4.99	0.86	2.49	1.5	0.75	0.3
422T	3.50	4.48	5.55	10.15	2.63	5.31	4.58	2.29	1.53

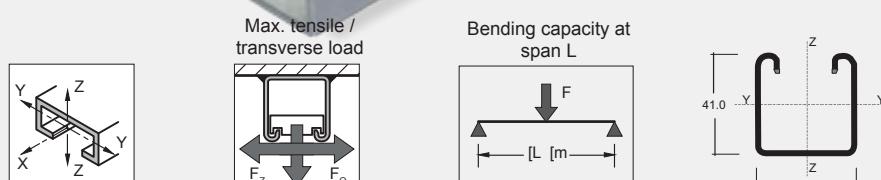
CCH-440T/441T (41x41x2.5)

Thickness : 2.5 mm
Standard Length : 3.00 m
Finishes : Pre-Galvanized,
Hot-Dip Galvanized.

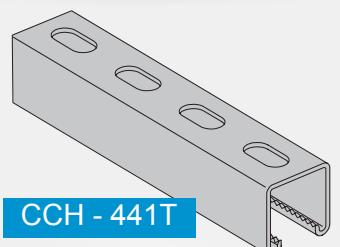
Due to its positive locking feature, this channel is ideally suited when increased loading capacities in longitudinal direction are required



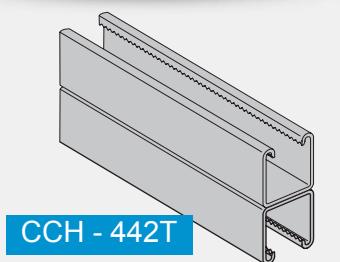
CCH - 440T



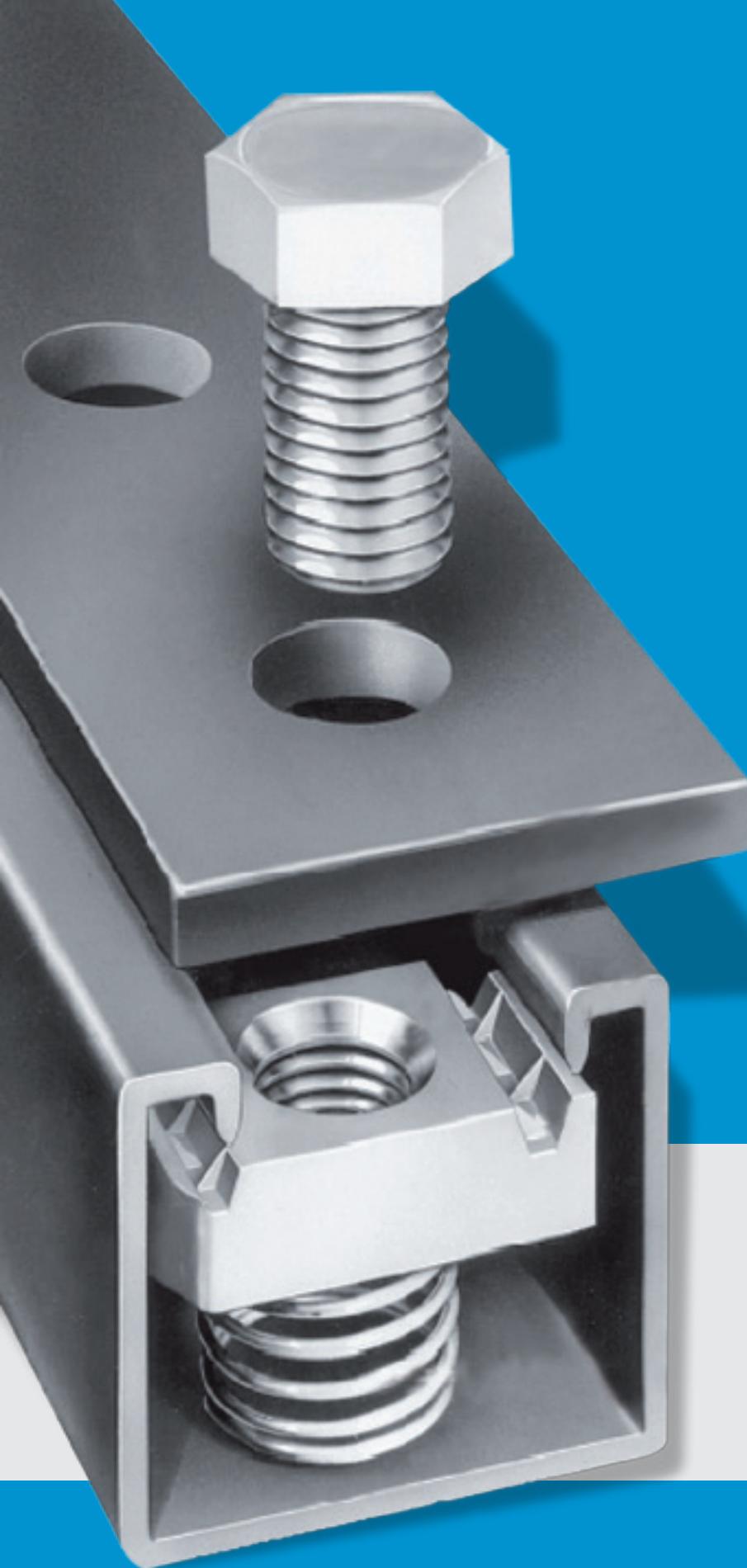
Channel CCH	Channel Weight G [Kg/m]	Cross Section A [cm²]	Moment of inertia I_y [cm⁴]	I_z [cm⁴]	Section modulus W_y [cm³]	W_z [cm³]	Bending capacity at span L		
							m 0.50	m 1.00	m 1.50
							[F [KN]		
440T	2.57	3.28	6.52	8.78	2.76	4.39	4.81	2.41	1.60
441T	2.30	2.91	5.62	8.74	2.57	4.35	4.48	2.24	1.49
442T	4.90	6.34	32.02	17.54	8.11	8.85	14.14	7.07	4.71



CCH - 441T



CCH - 442T



FITTINGS



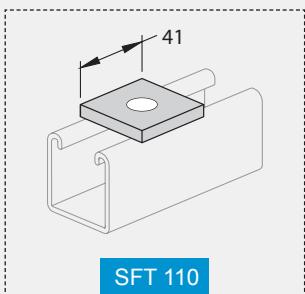
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This part offers a full section of fittings and accessories to complete SFSP's metal framing system.

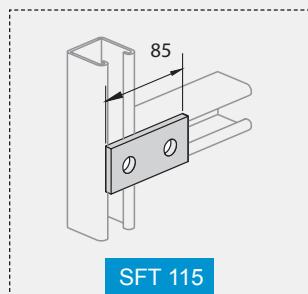
Standard Finishes: Hot Dip Galvanized .

Fitting Specifications (unless noted): Hole Size 13.0mm Diameter; Hole Spacing 20.0mm from end and 48.0 mm on center; Width 41.0mm; Thickness, 6.0mm (Order hardware separately).

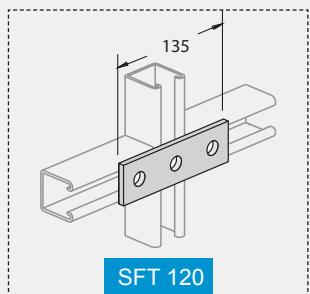
Square Washer



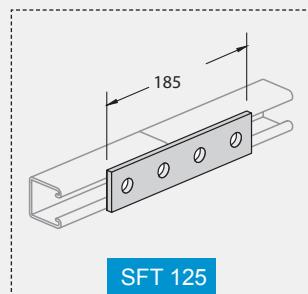
Splice Plate



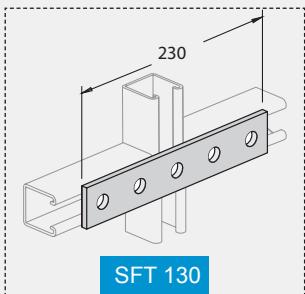
Splice Plate



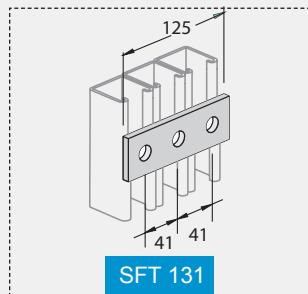
Splice Plate



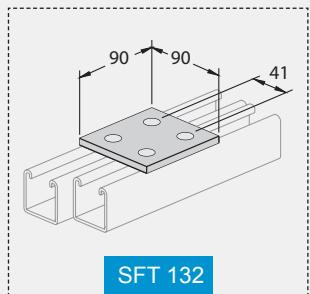
Splice Plate



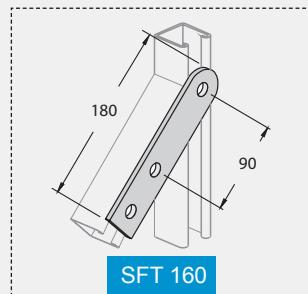
Splice Plate



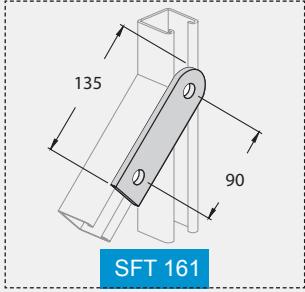
Square Splice Plate



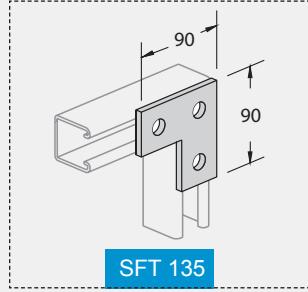
Angle Plate



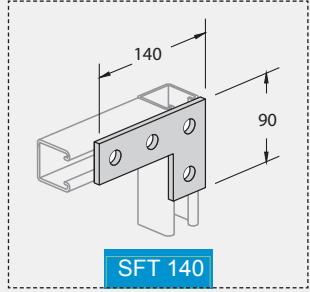
Angle Plate



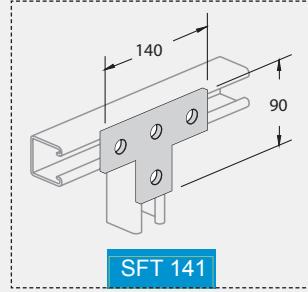
L - Plate



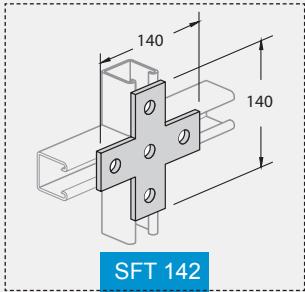
L - Plate



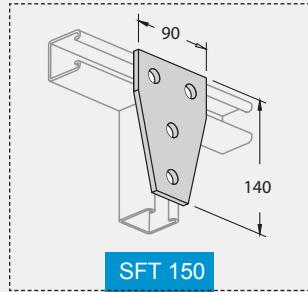
T - Plate



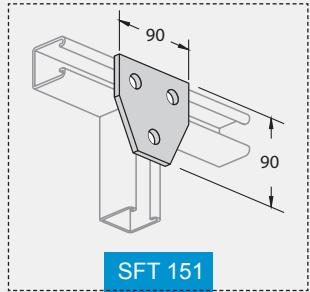
Plus Plate



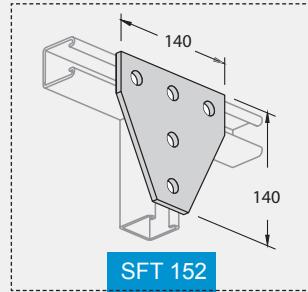
T - Plate



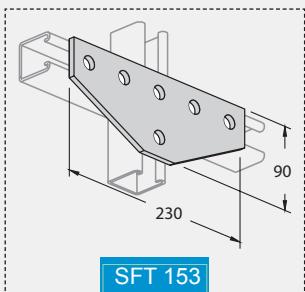
T - Plate



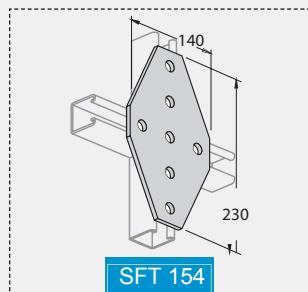
T - Plate



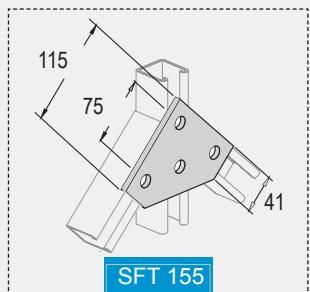
T - Plate



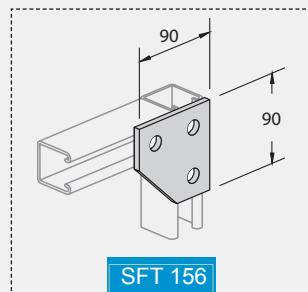
Plus Plate



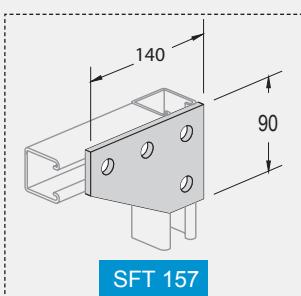
45° Plate



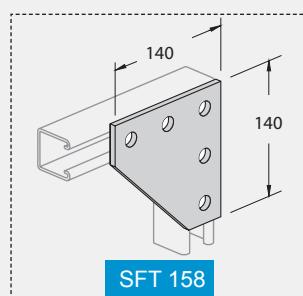
90° Plate



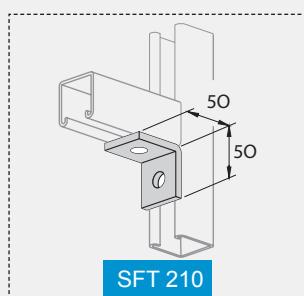
90° Plate



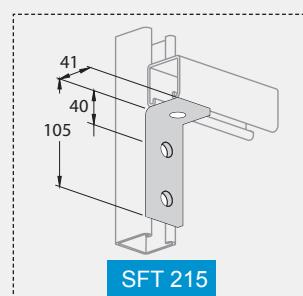
90° Plate



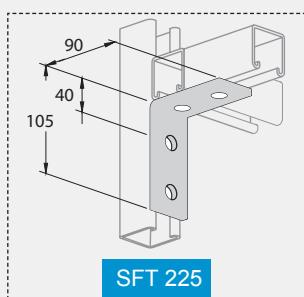
L - Bracket



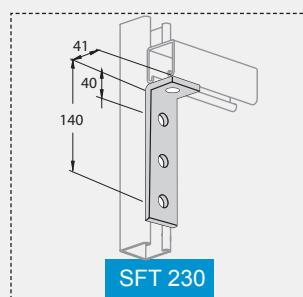
L - Bracket



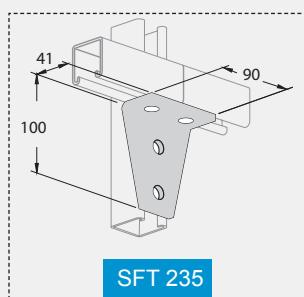
L - Bracket



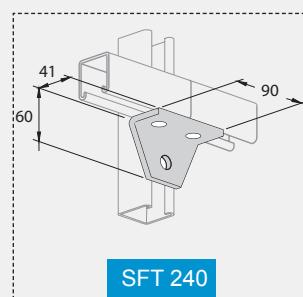
L - Bracket



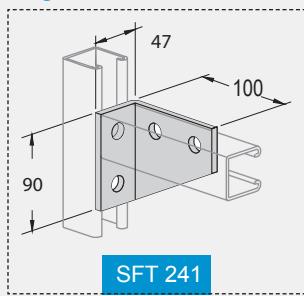
L - Plate



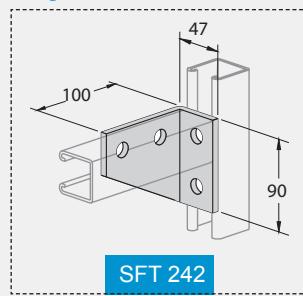
L - Plate



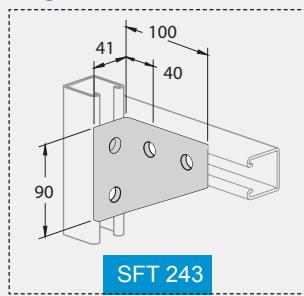
Angle Plate



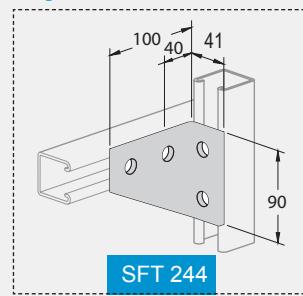
Angle Plate



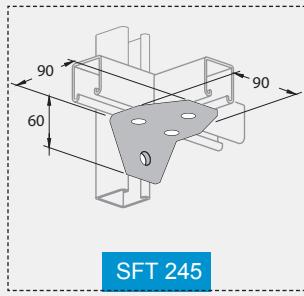
Angle Plate



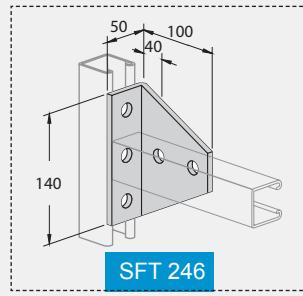
Angle Plate



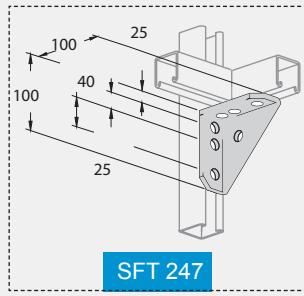
Angle Plate



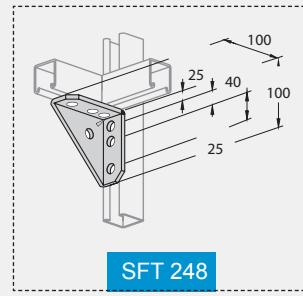
Angle Plate



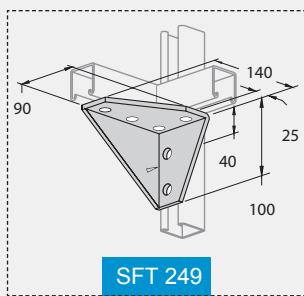
Angle Plate



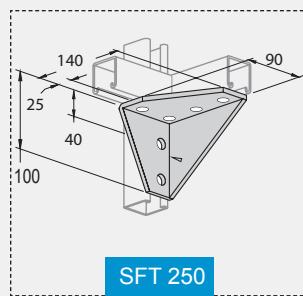
Angle Plate



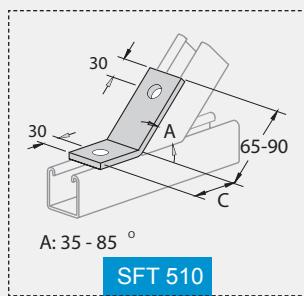
Angle Plate



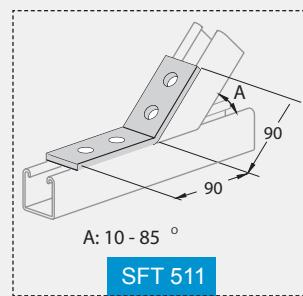
Angle Plate

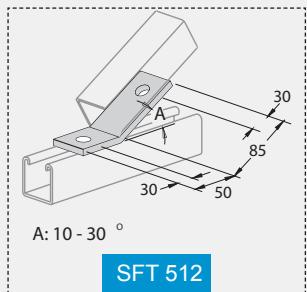
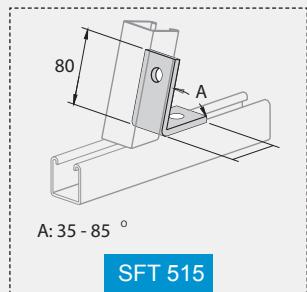
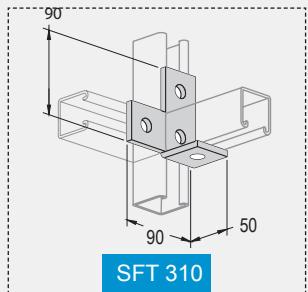
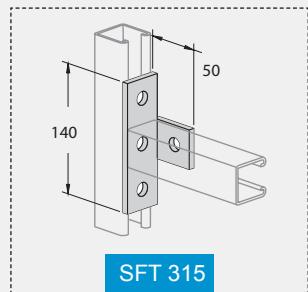
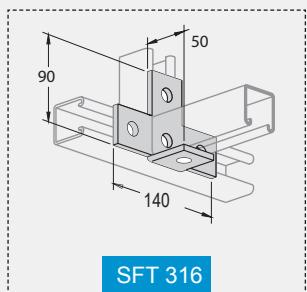
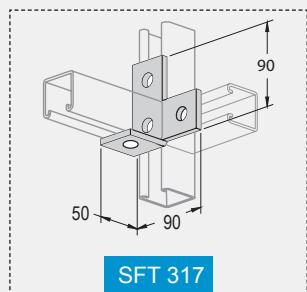
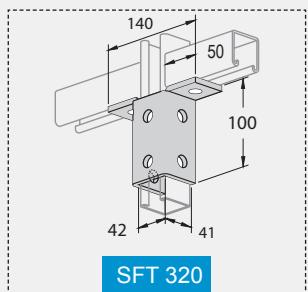
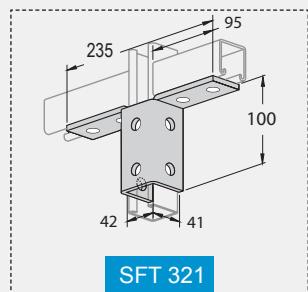
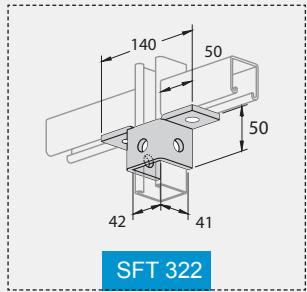
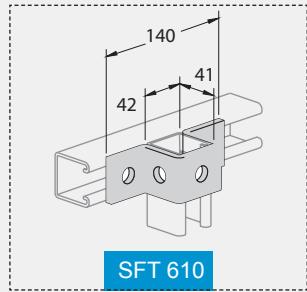
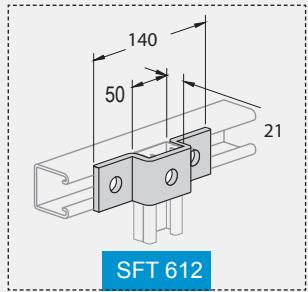
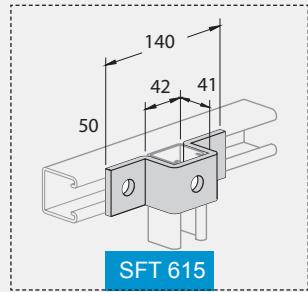
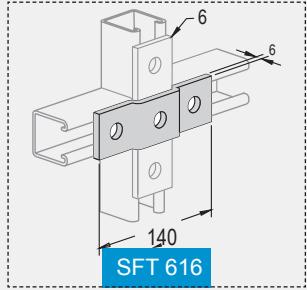
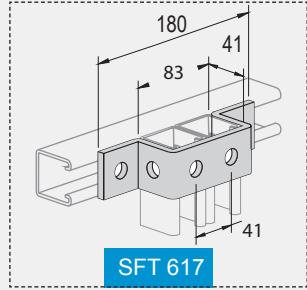
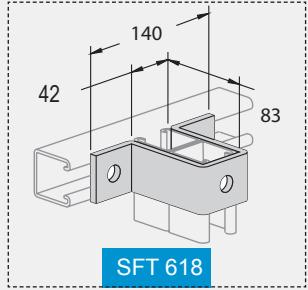
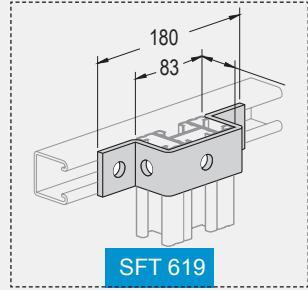
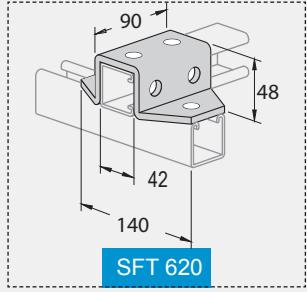
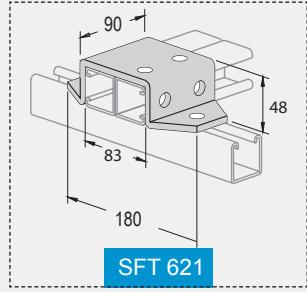
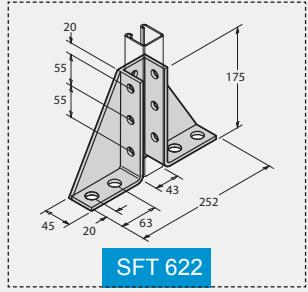
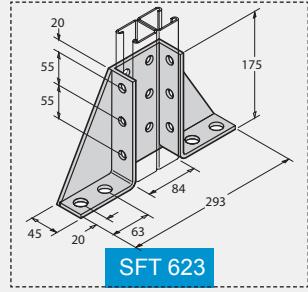


Angular Bracket

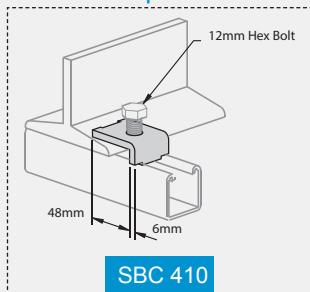


Angular Bracket

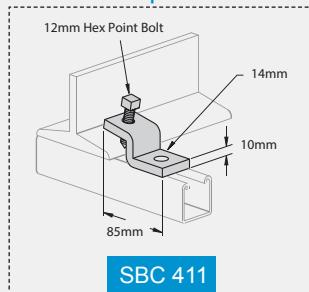


Angular Bracket**Angular Bracket****T - Corner Left****T - Corner Right****T - Center****T - Corner Right****Double Wing Joint****Double Wing Joint****Double Wing Joint****U & Wing Bracket****U & Wing Bracket****U & Wing Bracket****U & Wing Bracket****U & Wing Bracket****U & Wing Bracket****U & Wing Bracket****U & Wing Bracket****U & Wing Bracket****Single Channel Gusseted Bracket****Double Channel Gusseted Bracket**

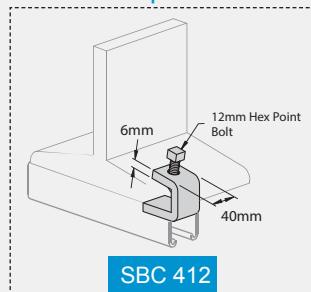
Beam Clamp



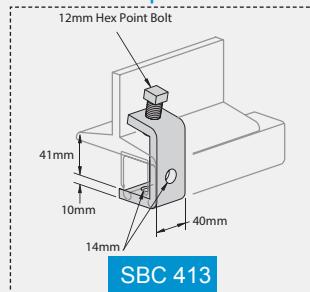
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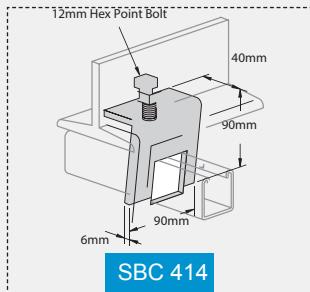
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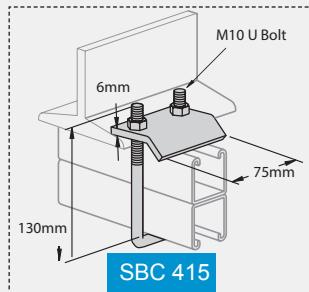
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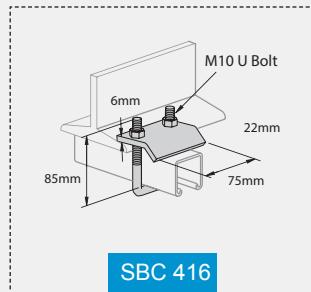
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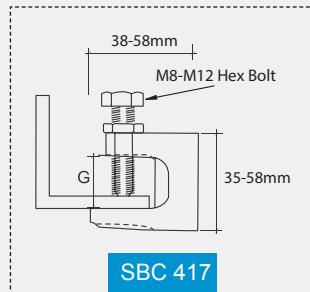
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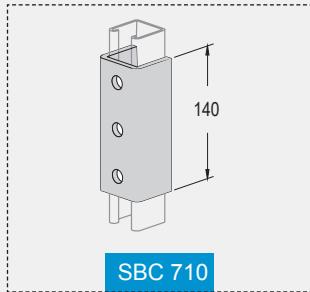
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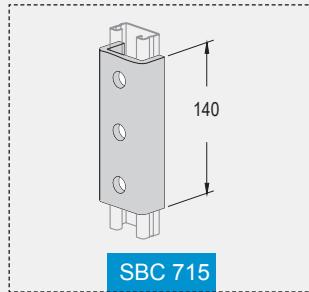
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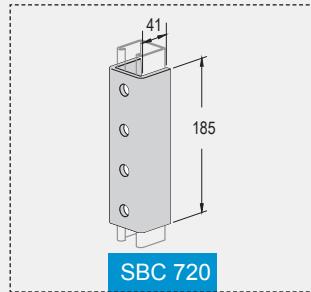
U - Joint Bracket



U - Joint Bracket



U - Joint Bracket



Plastic End Caps For Channels



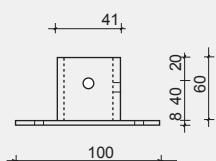
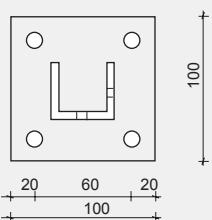
Ordering Codes

Codes	Fittings	Codes	Fittings	Codes	Fittings
STWS_F_00088861	SFT 110	STLB_F_00073395	SFT 246 HDG	STLB_F_00044676	SBC 410
STWS_F_00044120	SFT 115	STFP_F_00073407	SFT 247 OR 248	STZB_F_00044700	SBC 411
STWS_F_00044126	SFT 120	STLB_F_00044430	SFT 315	STCB_F_00044694	SBC 412
STWS_F_00044132	SFT 125	STLB_F_00044436	SFT 510	STCB_F_00044682	SBC 413
STWS_F_00044138	SFT 130	STLB_F_00044442	SFT 515	STLB_F_00044688	SBC 414
STFP_F_00044386	SFT (135-151-156)	STOM_F_00044156	SFT 610	STFP_F_00044730	SBC 415+416
STFP_F_00044392	SFT 140	STOM_F_00044150	SFT 615	SCUC_F_00044614	SBC 710
STFP_F_00050393	SFT 141	STOM_F_00097307	SFT 617	SCUC_F_00044628	SBC 715
STFP_F_00044404	SFT 150	STOM_F_00073389	SFT 618	SCUC_F_00044650	SBC 720
STLB_F_00044162	SFT 210	STOM_F_00104453	SFT 620	SCUC_F_00086843	SBC 720
STLB_F_00044168	SFT 215	STFP_F_00044398	(SFT (145-142		
STLB_F_00111075	SFT 220	STOM_F_00081325	SFT 615		
STLB_F_00044174	SFT 225	GNA_F_00044784	SFT 622		
STLB_F_00059565	SFT 225	GNA_F_00092261	SFT 622		
STLB_F_00044180	SFT 230	GNA_F_00044788	SFT 623		
STLB_F_00044410	SFT 235	SCUC_F_00044608	SFT 320		
STLB_F_00044420	SFT 240	SCUC_F_00044602	SFT 321		

Post Base

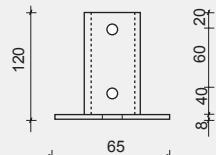
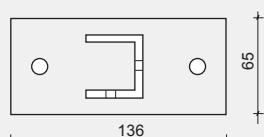
Base Plate with Single Fix

SFT 340



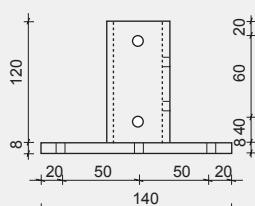
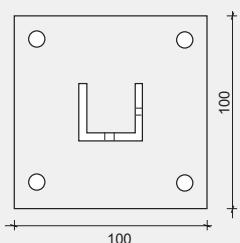
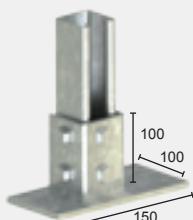
Base Plate with Double Fix

SFT 345



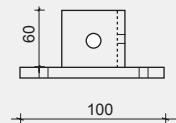
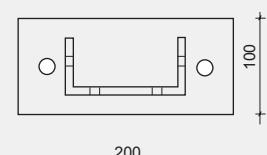
Base Plate with Double Fix

SFT 346



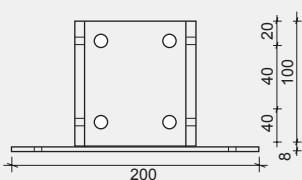
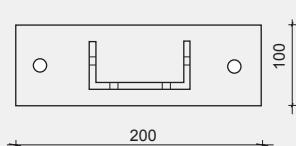
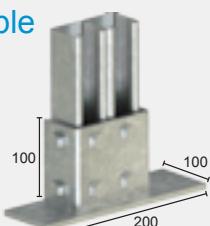
Base Plate with Double Channel

SFT 350



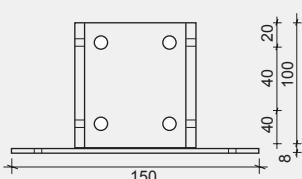
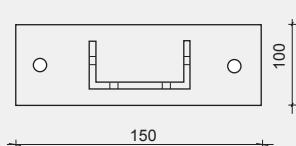
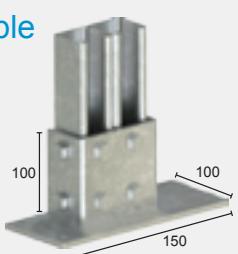
Base Plate with Double Channel Double Fix

SFT 355



Base Plate with Double Channel Double Fix

SFT 356



Ordering Codes

Codes	Fittings	Codes	Fittings
GNA_F_00044280	SFT340 HDG	GNA_F_00044288	SFT345 (4 HOLES) HDG
GNA_F_00054005	(SFT345(2HOLES	GNA_F_00088403	(SFT345(4 HOLES)(I-231
GNA_F_00044284	SFT345(2 HOLES) HDG	GNA_F_00044292	SFT350 HDG
GNA_F_00096889	-SFT345(2 HOLES (PLATE 10MM (O303	GNA_F_00044298	SFT355 HDG
		GNA_F_00088393	(SFT355(I-231



ACCESSORIES



www.sfsp-ikk.com

FRAMING SYSTEM ACCESSORIES

Threaded Rods, Hexagon Head Bolts, Hexagon Nuts, Washers

Fully Threaded Rods Grade 4.6 DIN 975

Threaded Rod
(STR)
DIN 975

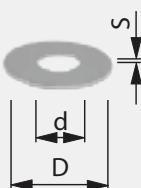


Zinc Plated Thread	Length (mm)	Load cap. (KN)
M6	2000/3000	2.2
M8	2000/3000	4.0
M10	2000/3000	6.4
M12	2000/3000	12.9
M16	2000/3000	17.3

Order Example : STR - M 12

Round Washers DIN 125

Washers
(SRW)
DIN 125

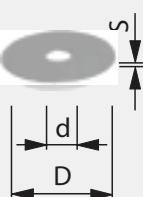


Zinc Plated for bolt	D (mm)	d (mm)	s (mm)
M6	12	6.4	1.6
M8	16	8.4	1.6
M10	21	10.5	2
M12	24	13	2.5
M16	30	17	3

Order Example: SRW - M 12 - DIN 125

Round Washers DIN 440,DIN 9021

Washers (SRW)
DIN 440,DIN 9021



DIN	Zinc Plated for bolt	D (mm)	d (mm)	s (mm)
440	M6	22	6.6	2
9021	M8	24	8.4	2
9021	M10	30	10.5	2.5
440	M12	45	13.5	4
9021	M12	37	13	3
9021	M16	50	17	3

Order Example: SRW - M 12 - DIN 9021

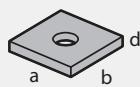
Square Washers SSW

Square Washers
(SSW)

SSW 40/40
for all channels
41/21 Series



SSW 41/41
for all channels
41/41 Series

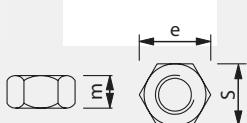


H.D. Glavanized for Bolt	a x b x d (mm)
M10	x 40 x 5 40
M12	x 40 x 5 40
M16	x 40 x 5 40
M6	x 40 x 6 40
M10	x 40 x 6 40
M12	x 40 x 6 40

Order Example: SSW 41/41 - M 12

Hexagon Nuts DIN 934, DIN EN 24032

Hexagon nut (SHN)
DIN 934 or ISO 4032
(= DIN EN 24032)



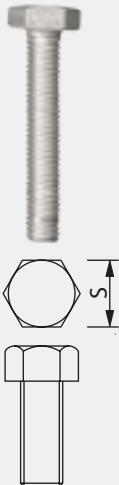
Zinc Plated Thread	S/m DIN (mm)	S/m ISO (mm)	e (mm)
M6	10/5	10/6	11.5
M8	13/6.5	13/7.5	15.0
M10	17/8	16/9.5	19.6
M12	19/10	18/12	21.9
M16	24/13	24/15.5	27.7

Order Example : SHN - M 12

Finishing Available : Electroplated, HDG, SS AISI 304 & 316

Machine HexHead Bolts DIN 933, DIN 24017

Hex Head Bolt (SHB)
DIN 933 or
EN 24017
(without nut)

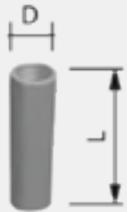


Zinc Plated Dimension	S DIN (mm)	S EN (mm)
M 6 x 12	10	10
M 6 x 25		
M 8 x 25	13	13
M 8 x 40		
M 10 x 20		
M 10 x 30		
M 10 x 45	17	16
M 10 x 60		
M 10 x 70		
M 12 x 22		
M 12 x 25		
M 12 x 30		
M 12 x 40	19	18
M 12 x 50		
M 12 x 60		
M 12 x 80		
M 12 x 90		
M 16 x 40		
M 16 x 60	24	24
M 16 x 90		

Order Example : SHB - M 12

Coupler Sleeves Rounded

Coupler Sleeves (SCS)



Electroplated Thread	D (mm)	L (mm)	Load cap. (KN)
M6	10/10	15	2.2
M8	12/14	20	4.0
M10	13/16	25	6.4
M12	16/20	30	9.3
M16	21/25	40	17.3
M20	26/32	50	27.0

Order Example: SCS - M 16

Hexagonal Rod Coupler

Hexagonal Rod Coupler with view hole (SHR)

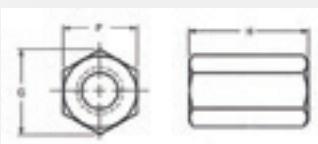


Electroplated Thread	S (mm)	L (mm)	Load cap. (KN)
M10	13	40	6.4
M12	17	40	9.3
M16	22	50	17.3

Order Example: SHR - ZP - M 12

Hexagonal Rod Coupler

Hexagonal Rod Coupler with view hole (SHR)



Size	G	F		H	
		Min.	Min.	Max.	Min.
M6	11.05	9.78	10	17.6	18
M8	14.38	12.73	13	23.5	24
M10	18.9	16.73	17	29.5	30
M12	21.1	18.67	19	35.4	36
M16	26.75	23.67	24	47.0	48
M20	32.95	29.16	30	58.1	60
M24	39.55	35.00	36	70.1	72
M30	50.85	45.00	46	87.8	90

Specification Requirements:

Dimensions: H, F and G - as above
Threads type: 6H
Mechanical Properties: class 6. Proof Load Strength 600MPa
Finish: Electro-plated

Remarks:

1. Above Coupling Nut to be used with Threaded Rod Class 4.6 or less
2. Threaded Rod to be extended inside the Coupler with distance equal or greater than the nominal Threaded diameter which is equal to H/2

CHANNEL NUTS

Nut without Spring



Nut with Short Spring



Nut with Long Spring

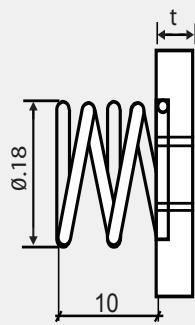
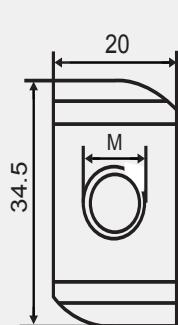


Hammer Head Bolt

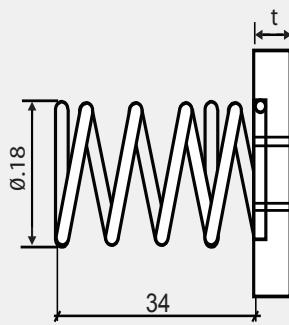


Material: Zinc plated steel and stainless steel 304 (A2), 316 (A4).

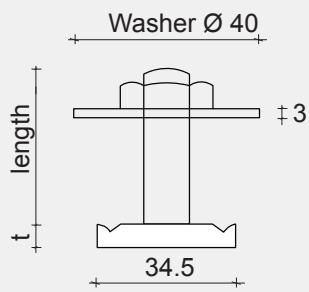
Tolerance: Metric thread 6 H acc. DIN 13-20.



Short Spring



Long Spring



Available length: L 30mm, 40mm, 50mm, 60mm.

Material: Zinc plated.

ALLOWABLE LOAD CAPACITIES FOR CHANNEL NUTS AND BOLTS

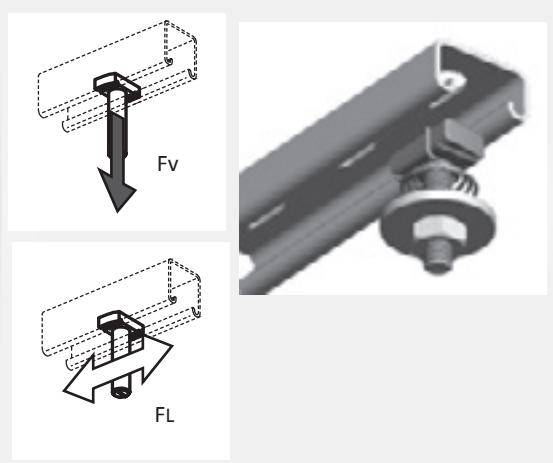
Mild Steel Channels, Bolt Material zinc plated or hot dip-galvanized

Thread Size	Pull out (Force Fv (kN)	Longitudinal (Force FL (kN)	Tightening (Torque (Nm)
M6	5.0	1.0	12.0
M8	6.0	2.4	28.0
M10	7.0	3.5	55.0
M12	7.0	5.0	55.0

Stainless Steel Channels, Bolt Material Stainless steel A4

Threaded Size	Pull out (Force Fv (kN)	Longitudinal (Force FL (kN)	Tightening (Torque (Nm)
M6	5.0	0.3	6.5
M8	6.0	0.6	16.0
M10	7.0	1.2	31.5
M12	7.0	1.7	55.0

Note: Do not exceed channel capacity



ALLOWABLE LOAD CAPACITIES FOR TOOTHED CHANNEL NUTS AND BOLTS

Mild Steel Toothed Channels, Bolt Material zinc plated or hot dip-galvanized Stainless Steel Toothed Channels, Bolt Material Stainless steel A4

Bolt Size	Longitudinal (Force FL (kN)	Tension Load ((Fv	Tightening (Torque (Nm)
M6	2.2	5.0	12
M8	4.0	6.0	28
M10	5.0	7.0	55
M12	5.0	7.0	55

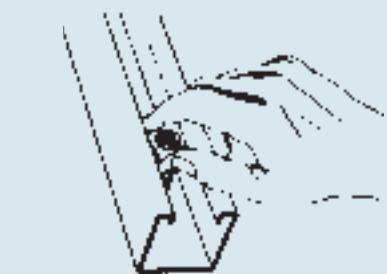
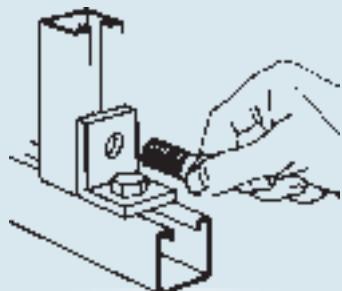
Bolt Size	Longitudinal (Force FL (kN)	Tension Load ((Fv	Tightening (Torque (Nm)
M6	2.2	5.0	6,5
M8	4.0	6.0	16.0
M10	5.0	7.0	31,5
M12	5.0	7.0	55.0

INSTALLATION & FEATURES

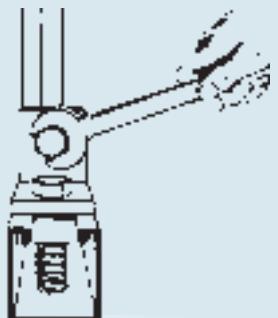
No Welding , No Drilling , No Special Tools, Strong, Fast, Economical and Adjustable.



- 1** Insert the spring nut anywhere along the continuous slotted channel. The rounded nut ends permit easy insertion.



- 2** A 90° clockwise turn aligns the grooves in the nut with the turned edges of the channel. The need for drilling holes is eliminated.



- 4** Additional channel sections can now be bolted to the fitting already in place by following procedure described in steps 1–3.

- 5** Tightening with a wrench locks the serrated teeth of the nut into the turned edges of the channel, to complete a strong, vise-like connection.

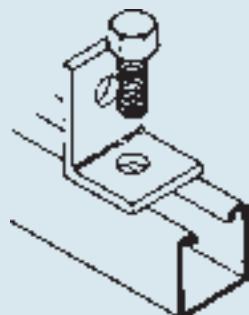
Hex-head bolt connects fitting to channel as it is threaded into spring .nut

Chamfer in the nut eases starting of the bolt. Nut teeth make a strong, vise-like grip when tightened against the turned .channel edges

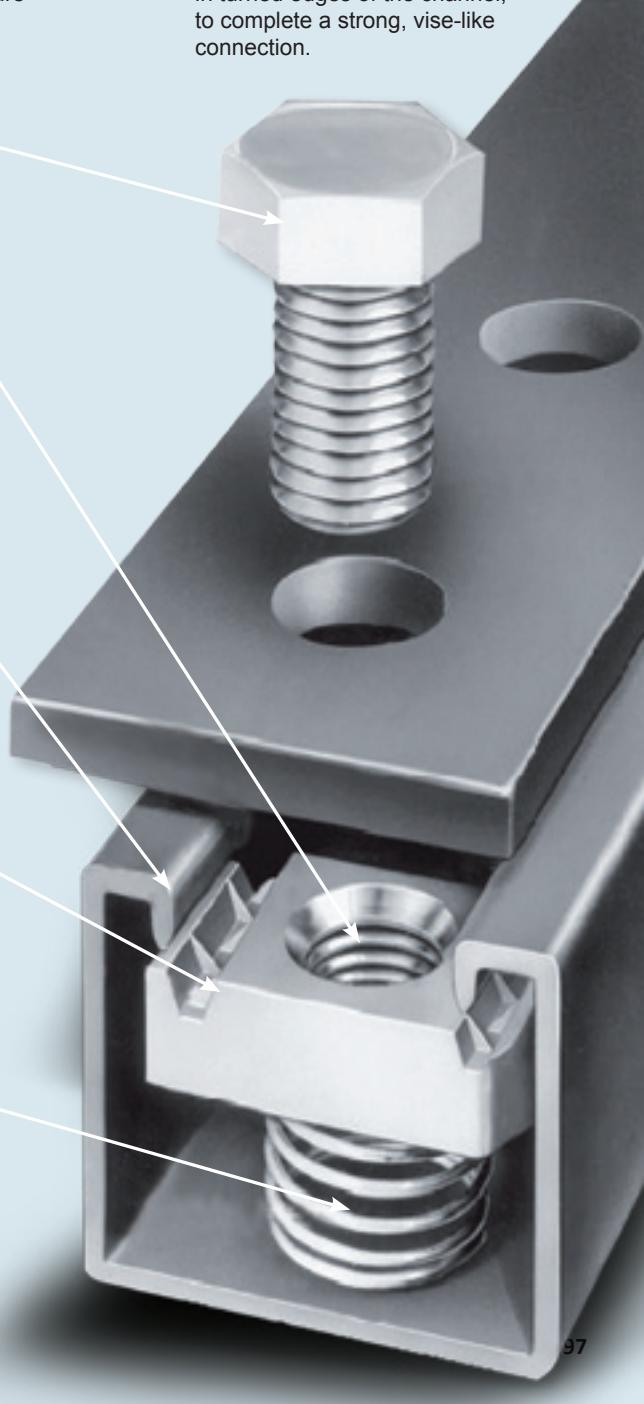
Channel edges and the nut's tapered grooves act as guides to provide fool-proof alignment .of connection

Nut teeth grip the channel's turned edges, tying the channel sides together in a "box" configuration for .added strength

Spring allows precision placement anywhere along channel length, then holds the nut in position while the connection is .completed

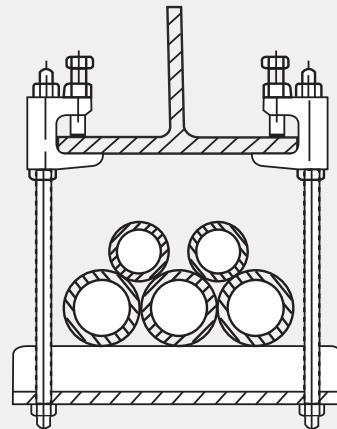


- 3** Insert the bolt through the fitting and into the spring nut.
(See illustration 5 for end view showing the nut in place)



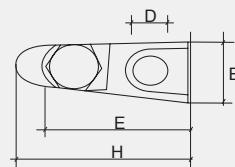
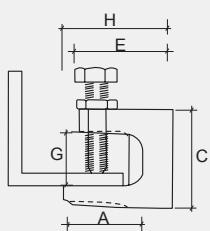
BEAM CLAMP - SBC

SBC



Material: Cast Iron ,hot dip galvanized casting tolerance according to DIN 1684- GTA /17.

- With hexagon head screw DIN 933 8.8, threaded end with cup point according to EN ISO 4753 and locknut DIN 439 .
- For sprinkler systems, heating, ventilation and air conditioning, acoustic tubes and sanitary installation machines and steel constructions.



Type	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)	Weight (g)	Safe work- ing load (KN)
SBC8	21.0	19.0	35.0	M8	35.0	M8	18.0	38.0	81.0	1.2
SBC10	29.0	21.0	35.0	M8	41.0	M10	23.0	50.0	147.0	2.5
SBC10	23.0	21.0	42.0	M10	41.0	M10	20.0	44.0	143.0	2.5
SBC12	35.0	23.5	54.0	M12	48.0	M10	26.0	58.0	216.0	3.5
SBC16	30.0	29.5	58.0	M16	55.5	M12	28.0	58.3	318.0	5.5

-Beam Clamps can generally be secured by safety straps.

-Beam Clamps shall be secured when using Beam for pipes larger than DN65 to avoid slipping of beam.



ANCHORS



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HEAVY DUTY ANCHORS

General Information

Direction of Loading

The direction of the applied load shall be considered to determine the most appropriate anchor. The tension and shear components shall be less than the recommended load/design resistance in the direction concerned.

Tensile Loads

Tensile loads are applied along the axis of fixing (see Fig.1).

Common examples include suspended ceiling applications and the suspension of mechanical services, pipework, ductwork, etc.

Shear Loads

Shear loads act at right angles to the axis of fixing and directly against the face of the structural material (see Fig.2).

Shear performance is governed mainly by the shear strength of the bolt material and by the compressive strength of the supporting substrate.

Oblique / Combined Loads

Oblique loads are a combination of tension and shear components (see Fig.3).

If the angle of the applied oblique load is within 10° of pure tension or pure shear, the safe working load for that direction may be assumed. Otherwise, the applied oblique load shall be resolved into its shear and tensile components.

Offset Loads

Offset loads act at right angles to the fixing axis but are offset from the surface (see Fig.4).

In this situation, the deflection of the bolt due to bending needs to be considered as well as the shear capacity of the anchor.

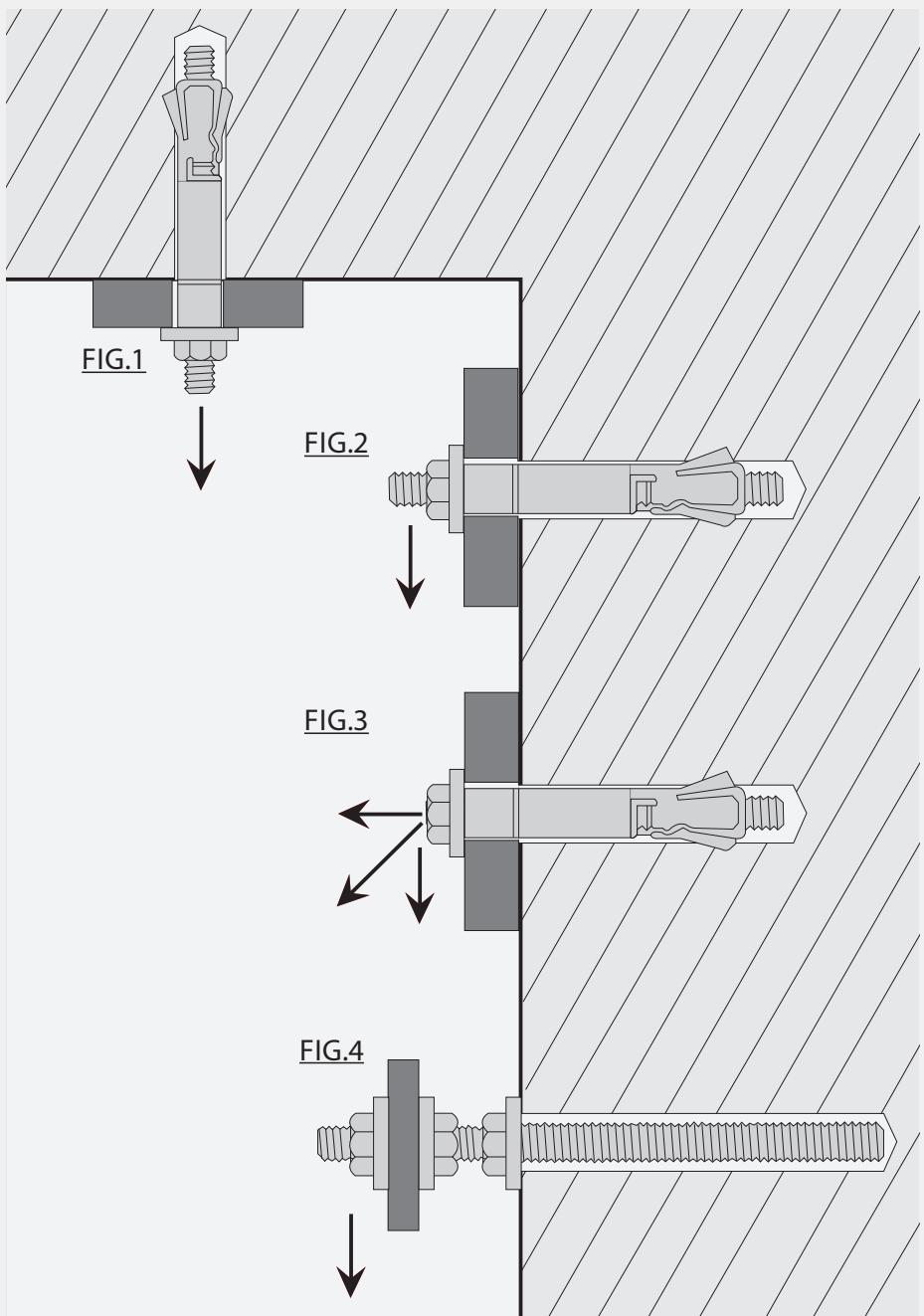
Slotted Holes in Fixture

When fixing anchors through slotted holes; it is important to ensure that there is an adequate surface contact between the washer and the fixture to guarantee a positive clamping force.

If in doubt, a square plate washer with a thickness of 3mm or above would be recommended in place of the standard washer supplied.

Diamond Drilled Holes

When holes are formed in the structure using a diamond drilling system; extra care is required to ensure the holes are thoroughly cleaned by brushing and blowing for at least three times. Also, to make a key for the anchor (particulary if a bonded anchor is installed) the sides of the hole shall be roughened up by inserting a standard masonry bit into the hole attached to a hammer action drilling machine. A resin with minimal shrinkage shall be selected for diamond drilled holes.



EXPANSION STEEL ANCHOR - STM

Typical Applications:

Cable trays, handrails, brackets, staircases, ladders, machines, window panels, base plates, scaffoldings and frameworks .

STM

Expansion Steel Anchor



STM/H



Features:

- Suitable for all screws or threaded bolts with metric thread.
- Low energy impact, power-saving assembly.
- Multiple removing and fixing.
- Inside threaded anchor, allows great flexibility.
- Can use variable lengths and art of threaded rods or bolts.
- Small edge distance and small distance between anchors.
- Provide uniform load by tightening the screw or hexagon nut, the cone pulls into the expansion anchor and tightens against the drilled hole.
- Suitable for use in concrete and natural stone.

Materials:

- zinc plated steel.
- stainless steel [SS 304 (A2) , SS 316 (A4)].

Technical Data:

Recommended loads (non-cracked concrete C 20/25).

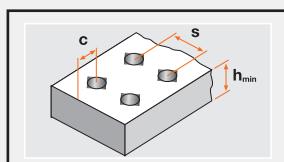
Type (order No)	Tension Load (kN)	Shear Load (kN)	Torque Moment (Nm)	Screw Grade
M6	2.5	2.3	10	4.6
M8	3.3	4.4	17	4.6
M10	4.7	6.5	34	4.6
M12	6.9	8.5	60	4.6

*for cracked Concrete we shall use 0,5 x this value (approximately)

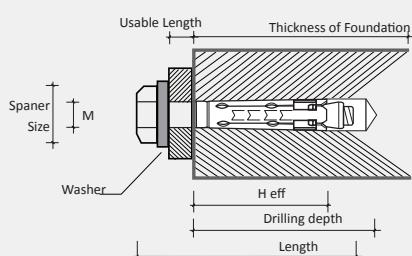
Setting Data:

Edge distance > 1,5 x H eff., distance between anchors > 3 x H eff.

Thickness of foundation > 2 x H eff.



Size	H eff. (mm)	Edge Dis- tance C (mm)	Distance Between Anchors S (mm)	Thickness of Foundation h_min (mm)	Washer (Ø)	Tightening Torque (Nm)	Spanner size (mm)
M6	40	60	120	100	x 1.6 12	10	10
M8	45	68	135	100	x 1.6 16	20	13
M10	55	83	165	110	x 2.0 20	40	17
M12	70	105	210	140	x 2.5 24	75	19



Installation Parameters:

H eff = Effective anchorage depth.

Bolt Size	Length exp.unit (mm)	Drill (Ø) (mm)	Drilling depth (mm)	H eff. (mm)	Usable Length (mm)	Screw Ø x Length (mm)
M6	45	10	55	40	5	M6 x 50
M8	50	12	60	45	10	M8 x 60
M10	60	15	80	55	20	M10 x 80
M12	75	18	90	70	25	M12 x 90

DROP IN ANCHOR - SDA

Typical Applications:

- Pipes, ventilation ducts, suspended ceilings, sprinkler systems, brackets, threaded rods, cable trays.

SDA



Materials:

- zinc plated steel.
- stainless steel [SS 304 (A2) , SS 316 (A4)].

Features:

- Provides permanently fixed threaded socket in concrete.
- Use in non-cracked concrete or cracked concrete and natural stone.
- The anchor will spread and tighten against the drilled hole after inserting with setting tool.
- Low setting depth, reduced drilling time.
- Enables cost-effective assembly .
- Multiple removing and fixing.

Technical Data:

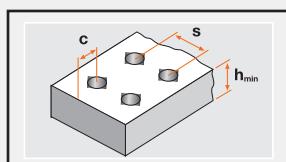
Recommended loads (non-cracked concrete C 20/25).

Threaded size	Tension Load (kN)	Shear Load (kN)	Torque Moment (Nm)
M6	2.0	1.2	4.0
M8	3.5	2.2	8.0
M10	4.25	3.5	15.0
M12	5.55	5.0	35.0

*for cracked Concrete we shall use 0,5 x this value (approximately)

Setting Data:

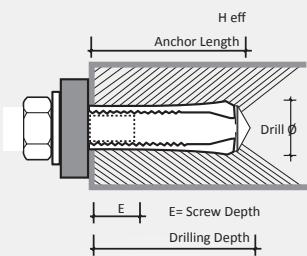
Edge distance > 1.5 x effective anchorage depth, distance between anchors > 3,0 x effective anchorage depth, min. thickness of foundation > 2,5 x H eff.



Size	H eff. (mm)	Edge Distance C (mm)	Distance Between Anchors S (mm)	Thickness of Foundation h_min (mm)	Tightening Torque (Nm)	Spanner size
M6	25	37.5	75	100	4	10
M8	30	45	90	100	9	13
M10	40	60	120	130	17	17
M12	50	75	150	140	30	19

Installation Parameters:

H eff = Effective anchorage depth.



Thread Size	Anchor Length (mm)	Thread Length (mm)	Drill (Ø) (mm)	Drilling Depth (mm)	Effective Anchorage Depth H eff. (mm)	Min. Screw Depth E (mm)	Max. Screw Depth E (mm)
M6	25	11	8	25	25	6	12
M8	30	13	10	30	30	8	13
M10	40	15	12	40	40	10	17
M12	50	20	16	50	50	12	18

SLEEVE ANCHOR - SAS

:Typical Applications

Uni-channel , railings, steel constructions , machines, high-racks, cable support systems and mechanical fixations

SAS



Features:

- Suitable for use in concrete, natural stone, brickwork and blockwork- small distance between anchors.
- Optimum performance in most base material types.
- No protruding threads after installation.
- Small distance between anchors and from edge.
- Controlled expansion.
- Zinc plated > 5µm.
- Effective force distribution in the drilled hole.
- Sleeve anchor with hexagon screw or with threaded bolt.

Technical Data:

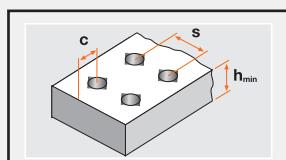
Recommended loads (non-cracked concrete C 20/25).

Bolt Size	Tension Load (kN)	Shear Load (kN)	Torque Moment (Nm)
M6	1.40	2.0	10
M8	2.45	3.3	25.0
M10	3.5	5.0	40.0
M12

*for cracked Concrete we shall use 0,5 x this value (approximately)

Setting Data:

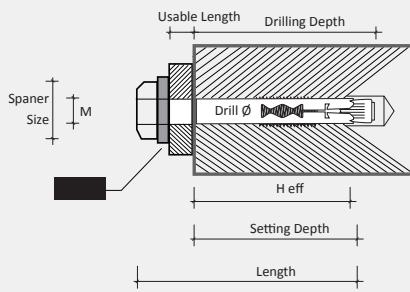
Edge distance > 1.5 x effective anchorage depth, distance between anchors > 3,0 x effective anchorage depth, min. thickness of foundation > 2,5 x H eff.



Bolt Size	H eff. (mm)	Edge Distance C (mm)	Distance Between Anchors S (mm)	Thickness of Foundation h_min (mm)	Washer (Ø) (mm)	Tightening Torque (Nm)	Spanner size
M6	35	52.5	105	70	x 1.6 18	8	10
M8	40	60	120	80	x 1.6 16	25	13
M10	50	75	150	100	x 2.0 20	40	17
M12	75	112.5	225	150	x 2.0 26	50	19

Sleeve Anchor - SAS:

with hexagon screw (non-cracked concrete C20/25).



Size	Length (mm)	Drill Ø (mm)	Hole Ø in Fixture (mm)	Drilling Depth (mm)	Setting Depth (Ø) (mm)	H eff. (mm)	Min.Usable Length (mm)
M6	45	8	10	55	35	35	5
M6	60	8	10	55	35	35	15
M8	60	10	12	60	40	40	15
M8	80	10	12	60	40	40	25
M10	70	12	14	70	50	50	15
M10	100	12	14	70	60	50	35

.(for cracked Concrete we shall use 0,5 x this value (approximately)*

THROUGH BOLT (WEDGE ANCHOR) - STB

Typical Applications:

Uni - channel, hand rails, steel construction, cable trays, supports, bracket, ducts and shelf feet.

STB

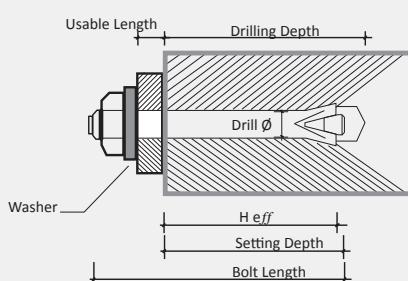
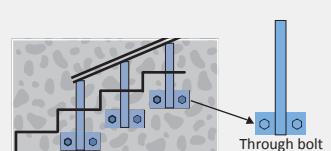
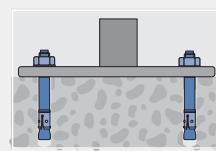
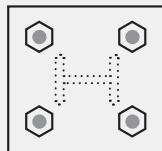


Materials:

- zinc plated steel.
- stainless steel [SS 304 (A2) , SS 316 (A4)].

Features:

- Suitable for use in cracked concrete or in non-cracked concrete and in natural stone.
- Special design of the clip in stainless steel which ensures a safe hold in the hole.
- Torque controlled expansion.
- Zinc plated > 5µm.
- User friendly, face fixing or through fixing.



Technical Data:

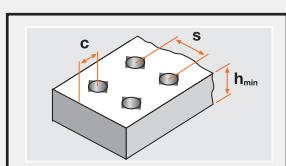
Through bolt zinc plated (non-cracked concrete C20/25).

Bolt Size	Tension Load (kN)	Shear Load (kN)	Torque Moment (Nm)
M6	2.0	1.90	4.0
M8	4.0	4.0	15.0
M10	5.95	5.95	30.0
M12	7.5	10.0	50.0
M16	12.0	16.0	100

*for cracked Concrete we shall use 0,5 x this value (approximately)

Setting Data:

Edge distance > 1,5 H_{eff} , distance between anchors > 3 x H_{eff}.
Thickness of foundation > 2 x H_{eff}.



Bolt Size	H _{eff} (mm)	Edge Distance C (mm)	Distance Between Anchors S (mm)	Washer (Ø)	Thickness of Foundation h _{min} (mm)	Tightening Torque (Nm)	Spanner Size
M6	40	60	120	x 1.6 12	100	7	10
M8	50	75	150	x 1.6 16	100	14	13
M10	58	87	174	x 2.0 20	120	30	17
M12	68	102	204	x 2.5 24	140	35	19
M16	80	120	240	x 3.0 30	160	80	24

SHIELD ANCHOR - SHA

Features:

- Assembly detachable, multiple removing and fixing.
- Low energy impact, power-saving assembly.
- Force controlled expansion.
- Flexibility inside threaded anchor.
- Variable length and art of threaded rods or bolts.
- By tightening the screw, the cone pulls into the sleeve and tense against the drill hole.
- Small edge distance and small distance between anchor.
- Expansion elements are held together by a spring.
- Optimum taper nut angle for maximum expansion.
- Pressed steel segment ensure consistent dimensional accuracy.
- Provide a projecting stud to support fixture during installation and removal.
- Suitable for use in concrete, natural stone, Brick and sand stone.

Typical Applications:

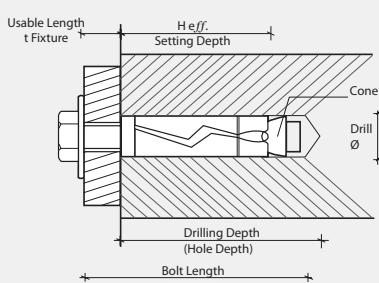
For fixing : steel construction, handrail, console, bracket, ladders, gate and spacing design.

SHA



Materials:

- zinc plated and die-cast.



Technical Data:

Recommended loads (concrete C 20/25 and in brick work).

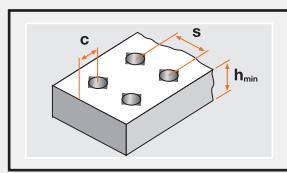
Size	Concrete		Torque Concrete N.m
	Tension Load KN	Shear Load KN	
M6	1.2	1.2	10
M8	1.6	1.6	25
M10	3.2	3.2	40
M12	4.8	4.8	60

*for cracked Concrete we shall use 0,5 x this value (approximately)

Setting Data:

Edge distance > 1,5 x H eff., distance between anchors > 3 x H eff.

Thickness of foundation > 2 x H eff.



Size	Distance to Edge C (mm)	Distance Between Anchors S (mm)	Min. Thickness of Foundation h_min(mm)	H eff. (mm)
M6	52.5	105	70	35
M8	60	120	80	40
M10	75	150	100	50
M12	90	180	120	60

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