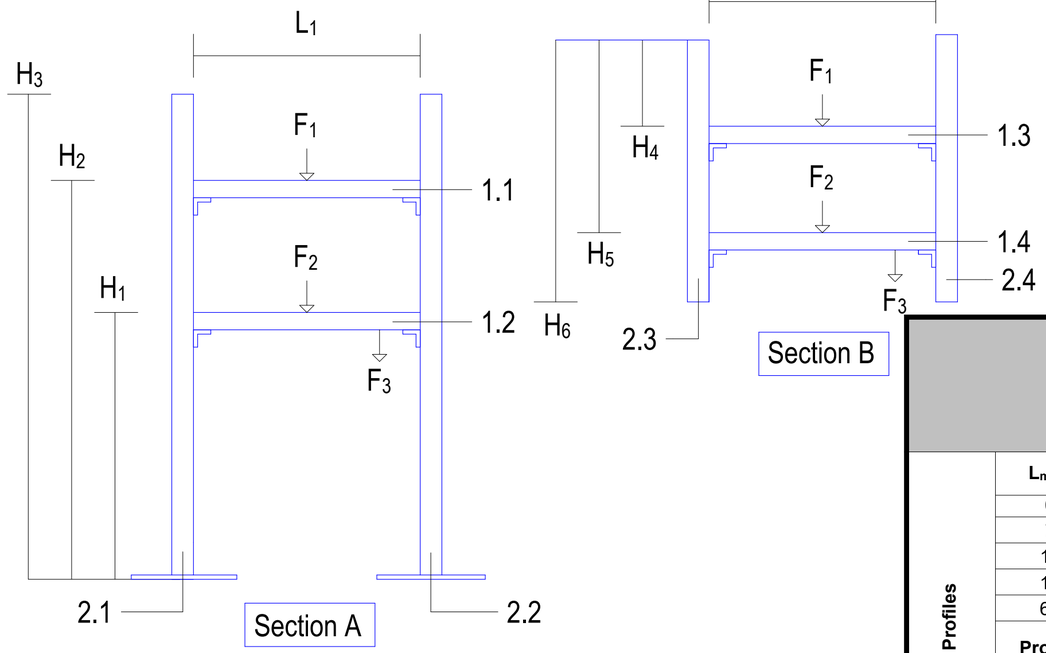
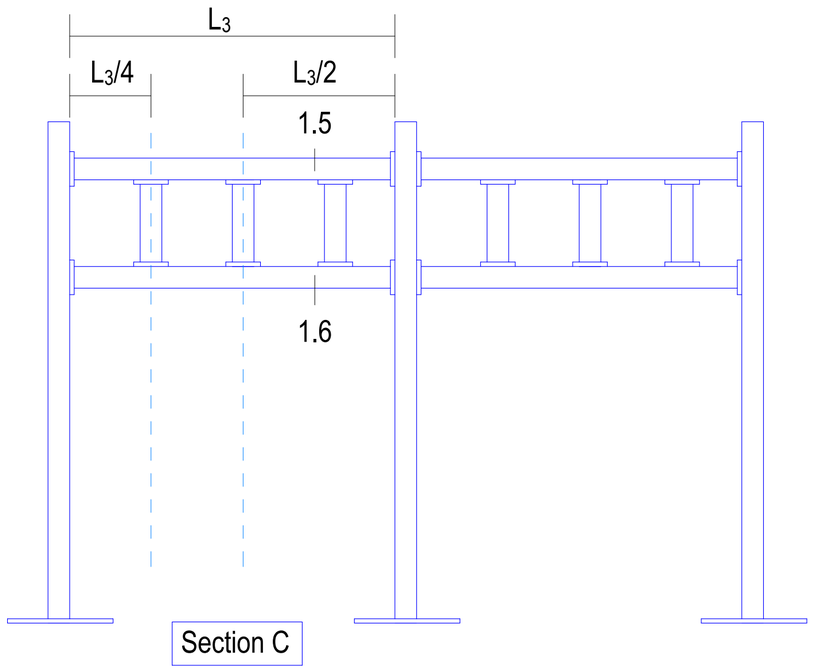
FORM 1A





NOTE:

FORM2A Production:
Defines primary and secundary support component sizes, types and part numbers.

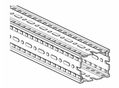
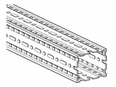
Scope Exclusion:
Frame interface with the building structure is not included in this document.

For comprehensive guidelines and additional information, contact the project management team.

DATA INPUT FORM

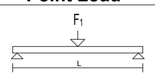
DATA INPUT - SIZING			
Item	Un	Value	Validated
H_1	mm	3590	
H_2	mm	3990	
H_3	mm	4512	
H_4	mm	157	
H_5	mm	557	
H_6	mm	742	
L_1	mm	742	
L_2	mm	742	
L_3	mm	6000	

DATA INPUT - LOADS					
Item	Un	Value	Max Span (m)	Value (kN)	Validated
F_1	kN/m	0.4413	1.5	0.6620	
F_2	kN/m	0.4413	1.5	0.6620	
F_3	kN/m	0.1961	1.5	0.2942	

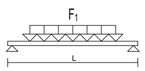
		Type:	Rod	Pressix CC 41	siFramo 80/30	siFramo 80	siFramo 100
							
Horizontal Profiles	**L_{max} (mm)**	**Cut Lenght (mm)**	**Max. Loads (kN)**				
	600	593		7.29	47.2	83.29	251.79
	750	742		4.67	30.20	53.30	161.15
	1000	990		2.62	16.99	29.98	90.64
	1200	1189		1.82	11.80	20.82	62.95
	6000	6000		0.07	0.47	0.83	2.51
	Profile ID	**Formula**	**Profile Selection**				
	1.1	F_1					
	1.2	F_2+F_3					
	1.3	F_1					
	1.4	F_2+F_3					
	1.5	$F_1+F_2+F_3$					
	1.6	$F_1+F_2+F_3$					
Vertical Profiles	**H_{max} (mm)**		**Max. Loads (kN)**				
	All Sizes						
	Profile ID	**Formula**	**Profile Selection**				
	2.1	$F_1+F_2+F_3$					
	2.2						
	2.3						
	2.4						

Horizontal Loads Calculation Method

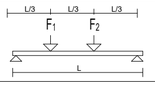
Point Load



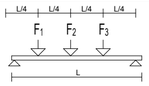
Distributed Load



2 Point Loads



3 Point Loads

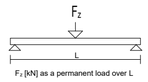


Example:

For a horizontal beam with a Lenght of 1000mm, the Maximum Loads supported for the different configuration of Loads are the following:

- Single Point Load - 12.06 kN
- Distributed Load - 24.13 kN/m
- 2 Point Load - 18.10 kN
- 3 Point Load - 18.09 kN

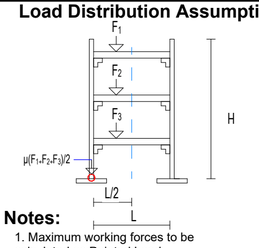
Based on these values, for the purpose of this Catalogue, we will consider that the Load will always be a Point Load in the center of the beam, which is the worst case scenario.



F_z [kN] as a permanent load over L

Vertical Loads Calculation Method

Load Distribution Assumption



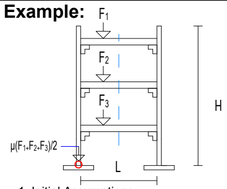
Notes:

1. Maximum working forces to be calculated as Pointed Load

2. The worst scenario should consider that the forces are off-center of the horizontal profiles and that will cause a bigger effort in the critical point of the vertical profile

3. $\mu(F_1+F_2+F_n)/2 \leq F_{max}$
   μ is the coefficient that assumes that the forces are not centered, concentrating more efforts on one side of the structure

Example:



1. Initial Assumptions:
- 3 levels;
- Loads Not Centered;
- Coefficient μ = 1,2;
- Maximum axial resistence of the vertical profile: 20kN

2. For this case:
- $\mu(F_1+F_2+F_3)/2 \leq F_{max}$
- $F_1+F_2+F_3 \leq (20*2)/1,2$
- $F_1+F_2+F_3 \leq (20*2)/1,2$
- $F_1+F_2+F_3 \leq 33,33kN$

3. The user only needs to compare the sum of the Fn Load values with the supported values in the table and select the appropriate beam type.

Support ID	DC.FWA.GAN.5.1
Order Amount	14

OVERVIEW

MC Prefab is a collaborative joint venture between CTS, MECWIDE, and BIMMS. The primary objective of this partnership is to streamline the production of Mechanical, Electrical, and Plumbing (MEP) support structures.
To achieve standardization and optimization in support production, installation, and to minimize material waste, a comprehensive catalog of solutions has been developed. This catalog defines all support solutions along with their respective variables.

Process Stages:
The overall process of MEP support structure production and installation is divided into three distinct stages:
1-Preparation
2-Production
3-Installation
Each stage requires specific documentation, outlined as follows:
Form1A: Base Specification for Support Solution Definition
Form2A: Fabrication Drawing
Form3A: Installation Drawing
These documents ensure the standardization and efficiency of the entire process, from initial preparation through to final installation.

For any further details or clarifications, please refer to the MC Prefab documentation guidelines or contact the project management team.

Naming Convention

DC.FWA.COR.1.1-1A
- Document Type
- Support Type
- Building Area Type
- Project Standard Type
- Project Type

Rev.	Date	Description	Sign.	Veri.
P02	03/12/2024	Issued For Information	GJ	JT
P01	08/11/2024	Issued For Information	GJ	JT

JOINT VENTURE:
MC Prefab Nordics

DESIGN & BUILD PARTNERS:
CTS Nordics
BIMMS integrated engineering
MECWIDE ENGINEERING CHALLENGES

DRAWING NAME:
DC.FWA.GAN.5.1-1A

DRAWING STATUS:		SCALE:	STATUS:
Issued For Information			S2
DATE CREATED:	LAST REV. DATE:	SIGNED:	CONTROL:
08/11/2024	03/12/2024	GJ	JT
DRAWING NUMBER:		FORMAT:	REVISION:
FIN3005-BMS-XX-XX-DR-J-75111		A2	P02

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