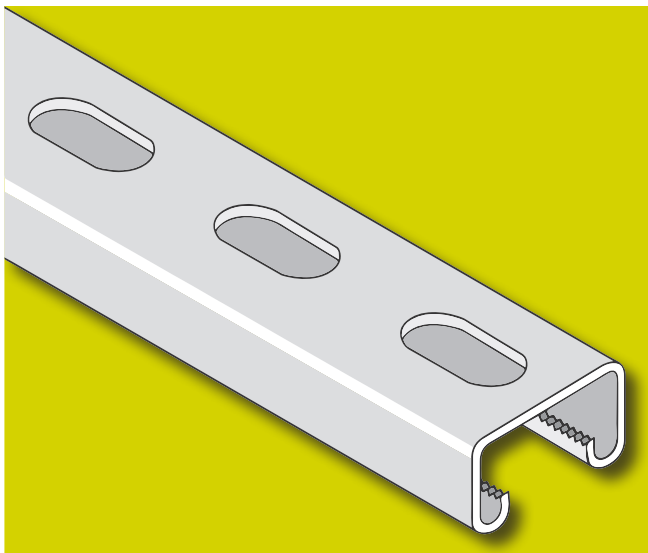
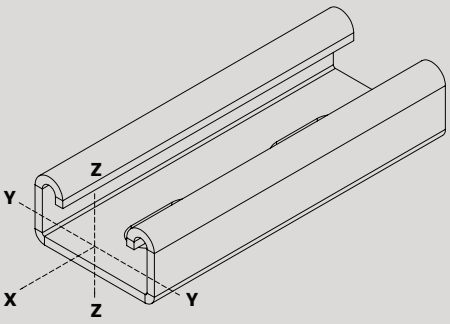
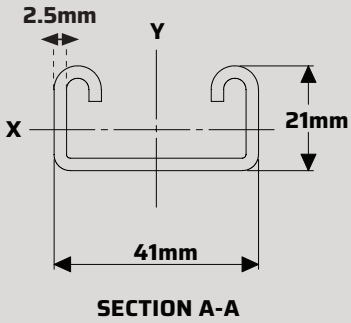
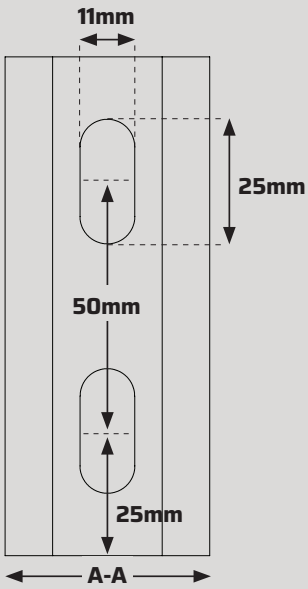


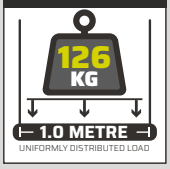
41 x 21 x 2.5 - Slotted Channel

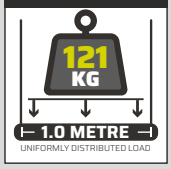






TECHNICAL DATA	PG, HDG & ZM	SS
Product Weight:	1.74 kg/m	1.74 kg/m
Minimum Yield Stress:	280N/mm²	240N/mm²
Uniformly distributed load for 1M (Fmax):	126 kg/m	121 kg/m





Area	MOMENT OF INERTIA		SECTION MODULUS		RADIUS OF GYRATION	
	I y-y	I z-z	S y-y	S z-z	R y-y	R z-z
2.06 cm²	1.09cm⁴	5.37cm⁴	0.78cm³	2.62cm³	0.73cm	1.61cm

FINISH DATA

PRE-GALVANISED CHANNEL (PG)	
Material Standard:	BS EN 10346 / BS 6946
Material Specification:	S280GD + Z275
Minimum Yield Stress:	280N/mm²
PG Minimum Zinc Coating Mass:	275g/m²
PG Typical Zinc Coating Thickness:	20µm

STAINLESS STEEL (SS)	
Material Standard:	Coil Hot Rolled to BS EN 10088-3:2023
Material Specification:	1.4404+1D / 316L (A4)
Minimum Yield Stress:	240N/mm²
Finish:	Self Colour

HOT-DIP GALVANISED CHANNELS (HDG)	
Material Standard:	BS EN 10346 / BS 6946
Material Specification:	S280GD + BS EN 1461
Minimum Yield Strength:	280N/mm²
Hot Dip Galvanising to:	BS EN 1461:2009
Minimum Average Coating Thickness:	55µm

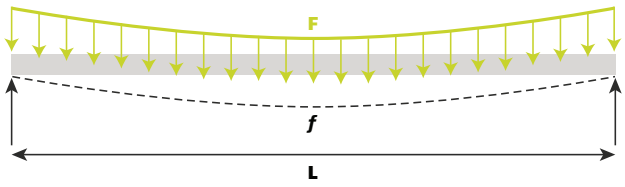
ZINC MAGNESIUM (ZM)	
Material Standard:	BS EN 10025-2:2019 / BS 6946:1988
Material Specification:	S280GD + ZM
Minimum Yield Strength:	280N/mm²
Hot Dip Galvanising to:	BS EN 10346:2015
Minimum Average Coating Thickness:	25µm

41 x 21 x 2.5 - Slotted Channel

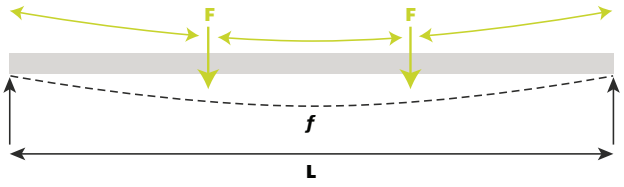
LOAD DATA

			ULTIMATE LOADS - LOAD 1		DESIGN LOADS			
CODE	FINISH HDG / PG	LENGTH (L) mm	ULTIMATE UNIFORMLY DISTRIBUTED LOAD Fmax kN	MAX DEFLECTION f max mm	**LOAD 1** - SAFE UNIFORMLY DISTRIBUTED LOAD F kN	**LOAD 2** - SAFE CENTRAL POINT LOAD F kN	**LOAD 3** - SAFE TWO POINT LOAD F kN	**LOAD 4** - SAFE THREE POINT LOAD F kN
HOT-DIP GALVANISED								
2011 **11256**	HDG	3000	0.611	15.83	0.359	0.354	0.201	0.119
2011 **16966**	HDG	6000	0.299	61.98	0.176	0.165	0.100	0.059
PRE-GALVANISED								
2011 **01005**	PG	3000	0.611	15.83	0.359	0.354	0.201	0.119
2011 **01006**	PG	6000	0.299	61.98	0.176	0.165	0.100	0.059
PRE-CUT LENGTHS								
2015 **01132**	PG	250	2.362	0.15	*1.389*	*1.235*	*1.200*	*0.500*
2015 **01137**	PG	500	1.638	0.20	*0.964*	*0.971*	*0.747*	*0.394*
2015 **01142**	PG	750	1.492	0.6	*0.878*	*0.694*	*0.709*	*0.376*
2015 **01118**	PG	1000	1.423	1.37	*0.837*	*0.671*	*0.706*	*0.366*
2015 **01121**	PG	1200	1.395	2.31	0.821	0.657	0.616	0.359
2015 **01124**	PG	1500	1.311	4.25	0.771	0.644	0.389	0.241
2015 **01127**	PG	1700	1.152	5.43	0.677	0.638	0.352	0.213
2015 **01130**	PG	2000	0.968	7.43	0.569	0.561	0.302	0.184
ZINC MAGNESIUM								
2011 **17105**	ZM	3000	0.611	15.83	0.359	0.354	0.201	0.119
STAINLESS STEEL								
2011 **11175**	SS	3000	0.999	4.19	0.588	0.305	0.197	0.069

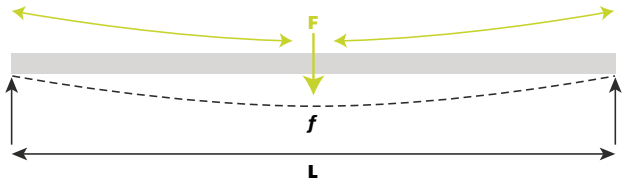
LOAD 1 Safe Uniformly Distributed Load



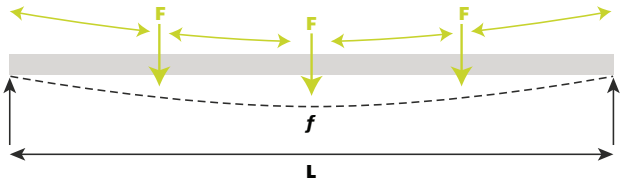
LOAD 3 Safe Two Point Load



LOAD 2 Safe Central Point Load



LOAD 4 Safe Three Point Load



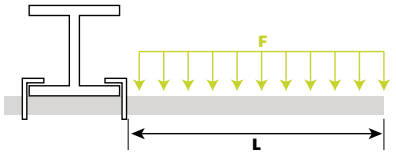
Notes to Beam Loads data:

- Yield Stress = 280N/mm²
- Modulus of elasticity: E = 210kN/mm²
- All beam loads are for simply supported beams
- All load data is for applied loads. The channel self-weight is already deducted.
- Ultimate Loads - maximum uniformly distributed load limited by stress using safety coefficient = 1.7
- Design Loads - maximum loads limited by deflection: f = L/200. (Values in italics are limited by stress not deflection)

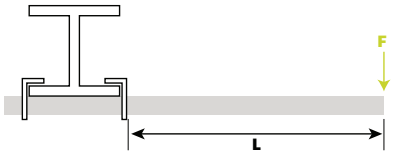
Cantilver & Column Load Data - 41 x 21 x 2.5 Slotted Channel

CANTILEVER LOADS

LOAD 1 Uniformly Distributed Load

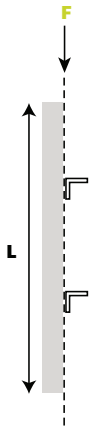


LOAD 2 End Point Load



COLUMN LOADS

LOAD 1 Eccentrically Loaded



LOAD 2 Concentrically Loaded

	CANTILEVER - DESIGN LOADS		COLUMN DESIGN LOADS	
LENGTH (OVER HANG TO SUSPEND FROM)*	**LOAD 1 - UNIFORMLY DISTRIBUTED LOAD**	**LOAD 2 - END POINT LOAD**	**LOAD 1 - ECCENTRICALLY LOADED**	**LOAD 2 - CONCENTRICALLY LOADED**
L (mm)	**F kN**	**F kN**	**F KN**	**F KN**
500mm	*0.66*	*0.31*	10.38	49.53
1000mm	*0.31*	*0.15*	7.16	47.00

*Length of the overhang to suspend from rather than total length

Notes to Column & Cantilever Loads data:

- Yield Stress = 275N/mm²
- Modulus of elasticity: E = 210kN/mm²

Cantilver:

- All load data is for applied loads. The channel self-weight is already deducted.
- Design Loads - maximum loads limited by deflection: *f* = L/150.
  (Values in italics are limited by stress using safety coefficient =1.7)
- Load capacity of beam clamps and primary steel must be considered

Column:

- Design loads include safety coefficient = 1.7
- Loads are calculated for pin-pin connections and column effective length of 1.0
- Concentric loads – loads applied at the centroid of the column (typical for beams placed on top of columns)
- Eccentric Loads – for loads applied at the open face of the channel (typical of channel bracket connections)