



Golden Lady, Valjevo, Serbia / 3.500 m<sup>2</sup> / 2009.

## Grede I - IF IF Beam

### Opis elemenata

Grede I i If (I filante) su horizontalni noseći elementi od prednapregnutog betona, konstantne visine, na koje se oslanjaju sekundarni elementi krova (npr. korube ili rožnjače), krovni kosači tipa "Opera", a koriste se i za horizontalne grede kranskih staza. Odvođenje atmosferske vode se rešava odvodom kroz poseban otvor koji se formira spajanjem dve susedne grede. Oslanjanje krajeva grede I i If vrši se preko neoprenskih ležišta.

Spoj grede i stuba se vrši uz pomoć armaturnih šipki koje su pričvršćene u stubu i prilikom montaže provlače se kroz otvore koji se nalaze na krajevima greda I i If. Otvori se potom zalivaju cementnim malterom.

### Montaža

Kod upotrebe kao krovnog pokrivača monolitizacija nije obavezna, na istu se polaže termo a potom i hidroizolacija. Prilikom izrade međuspratne konstrukcije predviđeno je da se preko koruba postavi stabilizujući sloj betona minimaln debljine 5cm, armiran mrežastom armaturom. Kod izvođenj stabilizujuće ploče, gornja površina se zaliva betonom klase ne manje od 30N/mm<sup>2</sup>, granulometrijskog sastava 0-12.

### Grede tipa I

Standardne širine b=50-60cm visine h=80-120cm, karakteriše pravougaoni (puni) poprečni presek na mestu oslonca. Grede širine b=60-70cm visine h=150cm su "I" poprečnog preseka na mestu oslonca.

### Grede tipa IF

Standardne širine B=50-60cm i visine H=80-90-90cm su konstantnog poprečnog preseka.



### Podaci Data Sheet

MATERIAL	KARAKTERISTIČNE ČVRSTOĆE N/mm <sup>2</sup>
MATERIAL	NOMINAL STRENGTH N/mm <sup>2</sup>
Beton Concrete	MB ≥ 55
Kablovi Tendons	f <sub>pk</sub> ≥ 1860
Čelik B500 Steel B500	σ <sub>vk</sub> ≥ 400

### Description of elements

The I and IF beams (I filante) are horizontal, prestressed, concrete bearing elements of uniform height, used to support secondary roofing elements (e.g. TT slabs or purlins), and Opera type roof supports. They are also used to carry horizontal crane rails. Atmospheric water is drained through a special opening formed by joining two adjacent beams.

I and IF beam ends are mounted on neoprene pads. The beams and columns are joined by reinforcing bars that are anchored to the columns and then pulled through trough openings at the ends of the beams during mounting. The openings are then filled with cement mortar.

### Mounting

I and IF beams ends are mounted on neoprene pads. The beams and columns are joined by reinforcing bars that are anchored to the columns and then pulled through trough openings at the ends of the beams during mounting. The openings are then filled with cement mortar.

### I - Type Beams

Standard width W=50-60cm and height H=80-120cm with rectangular (filled) cross-section at point of support. Beamwidth W=60-70cm and height H=150cm have I cross-section at point of support.

### IF - Type Beams

Standard width W=50-60cm and height H=80-90-100cm with uniform cross-section.



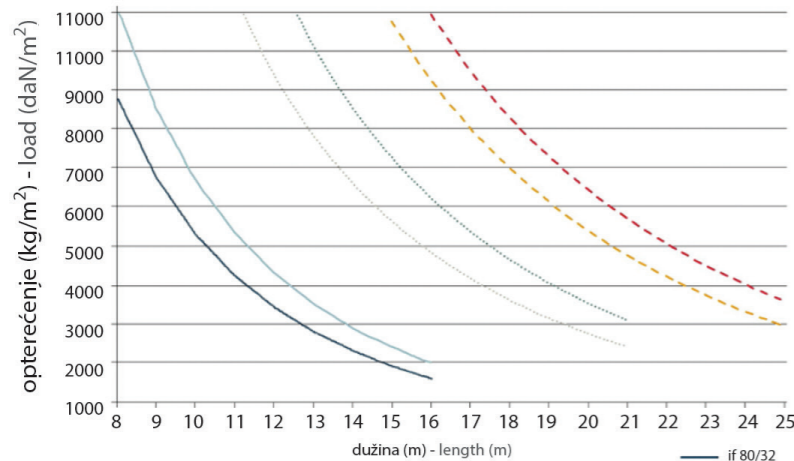
# Grede I - IF

## IF Beam

# Grede I - IF

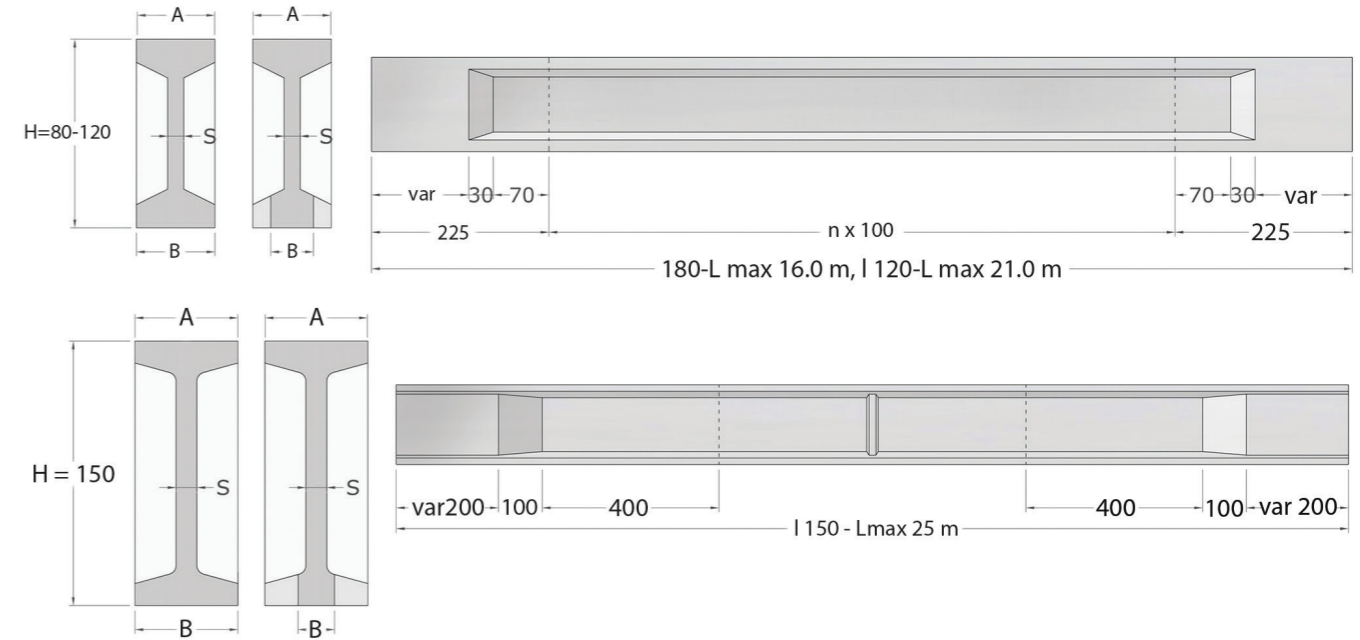
## IF Beam

### I grede (maks.opterećenje) I - Type beams (MAX LOAD)



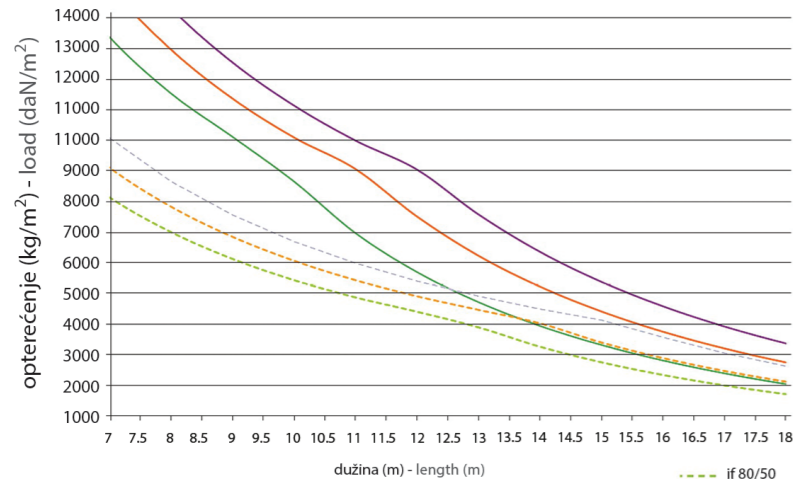
Opterećenje [kg/m] = (stalno + povremeno) [kg/m²] x a [m]  
 a = raster, osno rastojanje između greda  
 Load [daN/m] = (permanent + variable) [daN/m²] x a [m]  
 where: a = axial distance between 2 beams

H	A	B	S	srednja sopstv. težina kg/m mean dead weight daN/m
cm	cm	cm	cm	
80	60	60	20	925
	50	50	10	775
	60	42	20	875
	50	32	10	725
120	60	60	20	1150
	50	50	10	875
	60	42	20	1100
150	70	70	14	1350
	60	60	14	1275
	60	32	14	1225



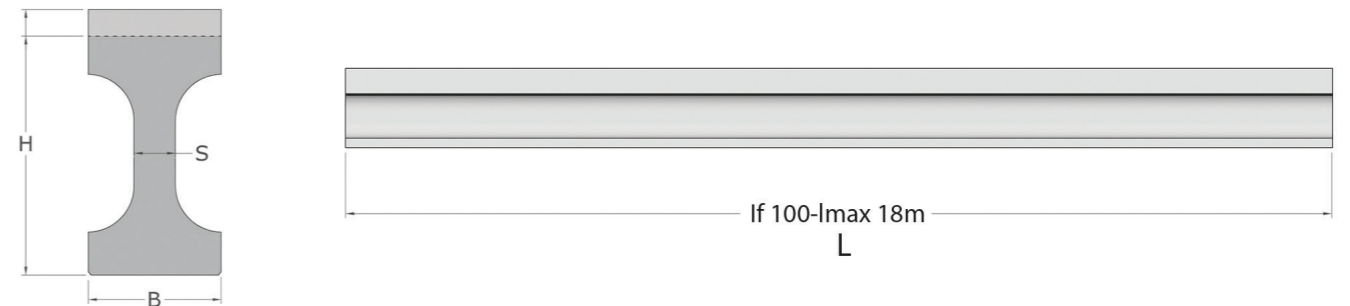
### I grede I - Type beams

### IF grede (maks.opterećenje) IF - Type beams - filanti (MAX LOAD)



Opterećenje [kg/m] = (stalno + povremeno) [kg/m²] x a [m]  
 a = raster, osno rastojanje između greda  
 Load [daN/m] = (dead+live) [daN/m²] x a [m] where:  
 a = axial distance between 2 beams

H	A	B	S	srednja sopstv. težina kg/m mean dead weight daN/m
cm	cm	cm	cm	
80	60	60	20	925
	50	50	10	775
	60	42	20	875
	50	32	10	725
120	60	60	20	1150
	50	50	10	875
	60	42	20	1100
150	70	70	14	1350
	60	60	14	1275
	60	32	14	1225



### IF grede IF - Type beams - filanti

Za detaljna tehnička uputstva i dalje informacije pogledati tehničko uputstvo ili se obratiti za tehničku podršku MG Precast-u  
 For detailed technical instructions and further information, consult the Technical Manual or contact MG Precast technical support