

Maximum Floor Spans

MAX-CORE I-joists
manufactured by
IB EWP Inc.

Table IBU-MF1 - IB400, IB450, IB600, IB700, IB800 and IB900x Maximum Floor Spans

40 psf Live Load (1 3/4" end bearing and 3 1/2" interior bearing without bearing stiffeners)

10 psf Dead Load

Allowable Stress Design (ASD) 100% Load Duration (L/480 live load, L/240 total load deflection criteria)

I-Joist		23/32" OSB subfloor glued and nailed Spacing of IB joist (o.c.)							
Series	Depth	Simple Span				Multiple Spans			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
IB400	7 7/8"	15'-8"	14'-4"	13'-7"	12'-8"	17'-1"	15'-8"	14'-10"	13'-4"
	8 5/8"	16'-10"	15'-5"	14'-7"	13'-7"	18'-4"	16'-10"	15'-9"	14'-1"
	9 1/4"	17'-10"	16'-4"	15'-5"	14'-5"	19'-6"	17'-10"	16'-5"	14'-8"
	9 1/2"	18'-3"	16'-8"	15'-9"	14'-9"	19'-11"	18'-3"	16'-8"	14'-11"
	11 1/4"	20'-10"	19'-0"	18'-0"	16'-6"	22'-9"	20'-2"	18'-5"	16'-6"
	11 7/8"	21'-8"	19'-10"	18'-9"	17'-0"	23'-8"	20'-10"	19'-0"	17'-0"
	14"	24'-7"	22'-6"	20'-10"	18'-8"	26'-5"	22'-10"	20'-10"	18'-8"
	16"	27'-3"	24'-7"	22'-6"	20'-1"	28'-5"	24'-7"	22'-6"	20'-0"
IB450	9 1/2"	19'-4"	17'-8"	16'-8"	15'-3"	21'-1"	18'-8"	17'-0"	15'-3"
	11 7/8"	22'-11"	20'-11"	19'-5"	17'-4"	24'-7"	21'-3"	19'-5"	17'-4"
	14"	26'-0"	23'-1"	21'-1"	18'-10"	26'-8"	23'-1"	21'-1"	18'-10"
	16"	28'-5"	24'-7"	22'-6"	20'-0"	28'-5"	24'-7"	22'-6"	20'-0"
IB600	7 7/8"	16'-5"	15'-0"	14'-2"	13'-3"	17'-11"	16'-5"	15'-6"	14'-5"
	8 5/8"	18'-4"	16'-11"	16'-1"	15'-1"	20'-1"	18'-5"	17'-6"	16'-5"
	9 1/4"	18'-10"	17'-2"	16'-3"	15'-2"	20'-6"	18'-9"	17'-8"	16'-6"
	9 1/2"	19'-2"	17'-6"	16'-7"	15'-5"	20'-11"	19'-1"	18'-1"	16'-10"
	11 1/4"	21'-11"	20'-1"	18'-11"	17'-7"	24'-0"	21'-11"	20'-8"	19'-3"
	11 7/8"	22'-10"	20'-10"	19'-8"	18'-4"	24'-11"	22'-9"	21'-5"	20'-0"
	14"	25'-10"	23'-7"	22'-3"	20'-9"	28'-3"	25'-9"	24'-4"	20'-0"
	16"	28'-8"	26'-2"	24'-8"	23'-0"	31'-4"	28'-7"	25'-0"	20'-0"
18"	31'-4"	28'-7"	27'-0"	25'-1"	34'-3"	30'-0"	25'-0"	20'-0"	
20"	33'-9"	30'-9"	29'-1"	26'-5"	36'-10"	30'-0"	25'-0"	20'-0"	
IB700	9 1/2"	20'-0"	18'-3"	17'-2"	16'-0"	21'-10"	19'-11"	18'-9"	17'-5"
	11 7/8"	23'-9"	21'-8"	20'-5"	19'-0"	23'-9"	23'-8"	22'-3"	20'-0"
	14"	26'-11"	24'-6"	23'-2"	21'-7"	29'-4"	26'-9"	24'-10"	20'-0"
	16"	29'-9"	27'-2"	25'-7"	23'-10"	32'-6"	29'-4"	25'-0"	20'-0"
IB800	7 7/8"	18'-1"	16'-6"	15'-7"	14'-6"	19'-9"	18'-0"	17'-0"	15'-10"
	8 5/8"	19'-5"	17'-9"	16'-9"	15'-7"	21'-3"	19'-4"	18'-3"	16'-11"
	9 1/4"	20'-8"	18'-10"	17'-9"	16'-6"	22'-7"	20'-7"	19'-4"	18'-0"
	9 1/2"	21'-1"	19'-3"	18'-1"	16'-10"	23'-0"	21'-0"	19'-9"	18'-4"
	11 1/4"	24'-2"	22'-0"	20'-9"	19'-3"	26'-4"	24'-0"	22'-7"	21'-0"
	11 7/8"	25'-1"	22'-10"	21'-6"	20'-0"	27'-5"	24'-11"	23'-6"	21'-10"
	14"	28'-5"	25'-11"	24'-5"	22'-9"	31'-1"	28'-3"	26'-8"	24'-9"
	16"	31'-5"	28'-8"	27'-0"	25'-1"	34'-4"	31'-3"	29'-5"	24'-9"
18"	34'-6"	31'-5"	29'-7"	27'-6"	37'-8"	34'-3"	31'-0"	24'-9"	
20"	37'-1"	33'-10"	31'-10"	29'-8"	40'-6"	36'-11"	31'-0"	24'-9"	
IB900x	7 7/8"	18'-6"	16'-11"	15'-11"	14'-10"	20'-3"	18'-5"	17'-5"	16'-3"
	8 5/8"	19'-11"	18'-2"	17'-2"	16'-0"	21'-9"	19'-10"	18'-9"	17'-5"
	9 1/2"	21'-6"	19'-8"	18'-6"	17'-3"	23'-6"	21'-5"	20'-3"	18'-10"
	11 7/8"	25'-6"	23'-3"	21'-11"	20'-5"	27'-10"	25'-5"	23'-11"	22'-3"
	14"	28'-11"	26'-4"	24'-10"	23'-2"	31'-7"	28'-9"	27'-1"	25'-3"
	16"	31'-11"	29'-1"	27'-5"	25'-7"	34'-11"	31'-10"	30'-0"	26'-10"
	18"	34'-10"	31'-9"	30'-0"	27'-11"	38'-1"	34'-8"	32'-9"	26'-10"
	20"	37'-8"	34'-4"	32'-5"	30'-2"	41'-2"	37'-6"	33'-6"	26'-10"
22"	40'-5"	36'-10"	34'-9"	29'-4"	44'-2"	40'-3"	33'-6"	26'-10"	
24"	43'-1"	39'-4"	36'-9"	29'-4"	47'-2"	40'-3"	33'-6"	26'-10"	

Read Design Notes on page 7 of 7

Bartel Engineering LLC
<http://www.bartelengineeringllc.com>
301-332-9724



Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 19701, Expiration Date: July 7, 2024.

August 29, 2023

Maximum Floor Spans

MAX-CORE I-joists
manufactured by
IB EWP Inc.

Table IBU-MF2 - IB400, IB450, IB600, IB700 IB800 and IB900x Maximum Floor Spans

40 psf Live Load (1 3/4" end bearing and 3 1/2" interior bearing without bearing stiffeners)
15 psf Dead Load

Allowable Stress Design (ASD) 100% Load Duration (L/480 live load, L/240 total load deflection criteria)

I-Joist		23/32" OSB subfloor glued and nailed Spacing of IB joist (o.c.)							
Series	Depth	Simple Span				Multiple Spans			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
IB400	7 7/8"	15'-8"	14'-4"	13'-7"	12'-8"	17'-1"	15'-7"	14'-3"	12'-8"
	8 5/8"	16'-10"	15'-5"	14'-7"	13'-5"	18'-4"	16'-5"	15'-0"	13'-5"
	9 1/4"	17'-11"	16'-5"	15'-6"	14'-1"	19'-7"	17'-3"	15'-9"	14'-1"
	9 1/2"	18'-3"	16'-8"	15'-9"	14'-3"	19'-11"	17'-5"	15'-11"	14'-3"
	11 1/4"	20'-10"	19'-1"	17'-7"	15'-9"	22'-3"	19'-3"	17'-7"	15'-9"
	11 7/8"	21'-8"	19'-10"	18'-1"	16'-2"	22'-11"	19'-10"	18'-1"	16'-2"
	14"	24'-7"	21'-10"	19'-11"	17'-9"	25'-2"	21'-10"	19'-11"	17'-9"
	16"	27'-1"	23'-6"	21'-5"	19'-2"	27'-1"	23'-6"	21'-5"	18'-2"
IB450	9 1/2"	19'-4"	17'-8"	16'-3"	14'-6"	20'-7"	17'-9"	16'-3"	14'-6"
	11 7/8"	22'-12"	20'-4"	18'-6"	16'-7"	23'-5"	20'-4"	18'-6"	16'-7"
	14"	25'-5"	22'-0"	20'-1"	18'-0"	25'-5"	22'-0"	20'-1"	18'-0"
	16"	27'-1"	23'-6"	21'-5"	18'-2"	27'-1"	23'-6"	21'-5"	18'-2"
IB600	7 7/8"	16'-5"	15'-0"	14'-2"	13'-3"	17'-11"	16'-5"	15'-6"	14'-5"
	8 5/8"	17'-8"	16'-2"	15'-3"	14'-2"	19'-3"	17'-7"	16'-7"	15'-6"
	9 1/4"	18'-9"	17'-2"	16'-2"	15'-1"	20'-6"	18'-9"	17'-8"	15'-8"
	9 1/2"	19'-2"	17'-6"	16'-7"	15'-5"	20'-11"	19'-1"	18'-1"	15'-8"
	11 1/4"	21'-11"	20'-1"	18'-11"	17'-7"	24'-0"	21'-11"	20'-8"	18'-2"
	11 7/8"	22'-10"	20'-10"	19'-8"	18'-4"	24'-11"	22'-9"	21'-3"	18'-2"
	14"	25'-10"	23'-7"	22'-3"	20'-9"	28'-3"	25'-7"	22'-8"	18'-2"
	16"	28'-8"	26'-2"	24'-8"	22'-6"	31'-4"	27'-3"	22'-8"	18'-2"
	18"	31'-4"	28'-7"	26'-9"	23'-11"	33'-10"	27'-3"	22'-8"	18'-2"
	20"	33'-9"	30'-9"	28'-2"	25'-2"	35'-7"	27'-3"	22'-8"	18'-2"
IB700	9 1/2"	20'-0"	18'-3"	17'-2"	16'-0"	21'-10"	19'-11"	18'-9"	16'-11"
	11 7/8"	23'-9"	21'-8"	20'-5"	19'-0"	23'-9"	23'-8"	21'-7"	18'-2"
	14"	26'-11"	24'-6"	23'-2"	21'-2"	29'-4"	25'-11"	22'-8"	18'-2"
	16"	29'-9"	27'-2"	25'-6"	22'-10"	32'-3"	27'-3"	22'-8"	18'-2"
IB800	7 7/8"	18'-1"	16'-6"	15'-7"	14'-6"	19'-9"	18'-0"	17'-0"	15'-9"
	8 5/8"	19'-5"	17'-9"	16'-9"	15'-7"	21'-3"	19'-4"	18'-3"	15'-9"
	9 1/4"	20'-8"	18'-10"	17'-9"	16'-6"	22'-7"	20'-7"	19'-4"	16'-9"
	9 1/2"	21'-1"	19'-3"	18'-1"	16'-10"	23'-0"	21'-0"	19'-9"	17'-11"
	11 1/4"	24'-2"	22'-0"	20'-9"	19'-3"	26'-4"	24'-0"	22'-7"	20'-5"
	11 7/8"	25'-1"	22'-10"	21'-6"	20'-0"	27'-5"	24'-11"	23'-6"	20'-5"
	14"	28'-5"	25'-11"	24'-5"	22'-9"	31'-1"	28'-3"	26'-8"	22'-6"
	16"	31'-5"	28'-8"	27'-0"	25'-1"	34'-4"	31'-3"	28'-2"	22'-6"
	18"	34'-6"	31'-5"	29'-7"	27'-4"	37'-8"	33'-9"	28'-2"	22'-6"
20"	37'-1"	33'-10"	31'-10"	28'-2"	40'-6"	33'-9"	28'-2"	22'-6"	
IB900x	7 7/8"	18'-6"	16'-11"	15'-11"	14'-10"	20'-3"	18'-5"	17'-5"	16'-3"
	8 5/8"	19'-11"	18'-2"	17'-2"	16'-0"	21'-9"	19'-10"	18'-9"	17'-5"
	9 1/2"	21'-6"	19'-7"	18'-6"	17'-3"	23'-5"	21'-5"	20'-2"	18'-9"
	11 7/8"	25'-6"	23'-3"	21'-11"	20'-5"	27'-10"	25'-5"	23'-11"	22'-3"
	14"	28'-11"	26'-4"	24'-10"	23'-2"	31'-7"	28'-9"	27'-1"	24'-4"
	16"	31'-11"	29'-1"	27'-5"	25'-7"	34'-11"	31'-10"	30'-0"	24'-4"
	18"	34'-10"	31'-9"	30'-0"	27'-4"	38'-1"	34'-8"	30'-6"	24'-4"
	20"	37'-8"	34'-4"	32'-5"	27'-7"	41'-2"	36'-7"	30'-6"	24'-4"
	22"	40'-5"	36'-10"	33'-4"	26'-8"	44'-2"	36'-7"	30'-6"	24'-4"
24"	43'-1"	39'-4"	33'-4"	26'-8"	47'-2"	36'-7"	30'-6"	24'-4"	

Read Design Notes on page 7 of 7

Bartel Engineering LLC
<http://www.bartelengineeringLLC.com>
301-332-9724

Page 2 of 7



Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 19701, Expiration Date: July 7, 2024.

August 29, 2023

Maximum Floor Spans

MAX-CORE I-joists
manufactured by
IB EWP Inc.

Table IBU-MF3 - IB400, IB450, IB600, IB700 IB800 and IB900x Maximum Floor Spans

40 psf Live Load (1 3/4" end bearing and 3 1/2" interior bearing without bearing stiffeners)

30 psf Dead Load

Allowable Stress Design (ASD) 100% Load Duration (L/480 live load, L/240 total load deflection criteria)

I-Joist		23/32" OSB subfloor glued and nailed Spacing of IB joist (o.c.)							
Series	Depth	Simple Span				Multiple Spans			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
IB400	7 7/8"	15'-8"	13'-10"	12'-7"	11'-3"	15'-11"	13'-10"	12'-7"	11'-3"
	8 5/8"	16'-10"	14'-7"	13'-4"	11'-11"	16'-10"	14'-7"	13'-4"	11'-11"
	9 1/4"	17'-7"	15'-3"	13'-11"	12'-5"	17'-7"	15'-3"	13'-11"	12'-4"
	9 1/2"	17'-10"	15'-5"	14'-1"	12'-7"	17'-10"	15'-5"	14'-1"	12'-4"
	11 1/4"	19'-8"	17'-1"	15'-7"	13'-11"	19'-8"	17'-1"	15'-7"	13'-11"
	11 7/8"	20'-4"	17'-7"	16'-1"	14'-4"	20'-4"	17'-7"	16'-1"	14'-3"
	14"	22'-4"	19'-4"	17'-8"	15'-9"	22'-4"	19'-4"	17'-8"	14'-3"
	16"	24'-0"	20'-10"	19'-0"	17'-0"	24'-0"	20'-10"	17'-10"	14'-3"
IB450	9 1/2"	18'-3"	15'-9"	14'-5"	12'-10"	18'-3"	15'-9"	14'-5"	12'-10"
	11 7/8"	20'-9"	18'-0"	16'-5"	14'-8"	20'-9"	18'-0"	16'-5"	14'-3"
	14"	22'-6"	19'-6"	17'-10"	15'-11"	22'-6"	19'-6"	17'-10"	14'-3"
	16"	24'-0"	20'-10"	19'-0"	14'-3"	24'-0"	20'-10"	17'-10"	14'-3"
IB600	7 7/8"	16'-5"	15'-0"	14'-2"	13'-3"	17'-11"	16'-2"	14'-9"	12'-4"
	8 5/8"	17'-8"	16'-2"	15'-3"	14'-0"	19'-3"	17'-2"	15'-5"	12'-4"
	9 1/4"	18'-9"	17'-2"	16'-2"	14'-7"	20'-6"	17'-10"	15'-5"	12'-4"
	9 1/2"	19'-2"	17'-6"	16'-7"	14'-10"	20'-11"	18'-2"	15'-5"	12'-4"
	11 1/4"	21'-11"	20'-0"	18'-3"	16'-4"	23'-2"	20'-0"	17'-10"	14'-3"
	11 7/8"	22'-10"	20'-8"	18'-10"	16'-10"	23'-10"	20'-8"	17'-10"	14'-3"
	14"	25'-10"	22'-8"	20'-8"	18'-6"	26'-2"	21'-5"	17'-10"	14'-3"
	16"	28'-2"	24'-5"	22'-3"	19'-11"	28'-2"	21'-5"	17'-10"	14'-3"
	18"	30'-0"	26'-0"	23'-8"	21'-2"	28'-6"	21'-5"	17'-10"	14'-3"
	20"	31'-7"	27'-4"	24'-11"	22'-1"	28'-6"	21'-5"	17'-10"	14'-3"
IB700	9 1/2"	20'-0"	18'-3"	16'-9"	15'-0"	21'-3"	18'-5"	16'-9"	14'-3"
	11 7/8"	23'-9"	20'-11"	19'-1"	17'-1"	24'-2"	20'-11"	17'-10"	14'-3"
	14"	26'-7"	23'-0"	21'-0"	18'-9"	26'-7"	21'-5"	17'-10"	14'-3"
	16"	28'-7"	24'-9"	22'-7"	20'-2"	28'-6"	21'-5"	17'-10"	14'-3"
IB800	7 7/8"	18'-1"	16'-6"	15'-7"	13'-11"	19'-9"	18'-0"	15'-6"	12'-4"
	8 5/8"	19'-5"	17'-9"	16'-9"	15'-4"	21'-3"	18'-7"	15'-6"	12'-5"
	9 1/4"	20'-8"	18'-10"	17'-9"	16'-1"	22'-7"	19'-9"	16'-6"	13'-2"
	9 1/2"	21'-1"	19'-3"	18'-1"	16'-3"	23'-0"	21'-0"	17'-7"	14'-1"
	11 1/4"	24'-2"	22'-0"	20'-9"	17'-4"	26'-4"	23'-10"	20'-0"	16'-0"
	11 7/8"	25'-1"	22'-10"	21'-6"	18'-5"	27'-5"	24'-1"	20'-1"	16'-1"
	14"	28'-5"	25'-11"	24'-4"	19'-6"	31'-1"	26'-6"	22'-1"	17'-8"
	16"	31'-5"	28'-8"	25'-7"	20'-6"	33'-7"	26'-6"	22'-1"	17'-8"
	18"	34'-6"	30'-10"	26'-10"	21'-6"	35'-5"	26'-6"	22'-1"	17'-8"
20"	37'-1"	32'-6"	27'-8"	22'-1"	35'-5"	26'-6"	22'-1"	17'-8"	
IB900x	7 7/8"	18'-6"	16'-11"	15'-11"	14'-10"	20'-3"	18'-5"	17'-5"	15'-6"
	8 5/8"	19'-11"	18'-2"	17'-2"	16'-0"	21'-9"	19'-10"	18'-9"	16'-8"
	9 1/2"	21'-6"	19'-7"	18'-6"	17'-3"	23'-5"	21'-5"	20'-2"	17'-4"
	11 7/8"	25'-6"	23'-3"	21'-11"	20'-0"	27'-10"	25'-5"	23'-11"	19'-2"
	14"	28'-11"	26'-4"	24'-10"	20'-0"	31'-7"	28'-9"	23'-11"	19'-2"
	16"	31'-11"	29'-1"	25'-7"	20'-6"	34'-11"	28'-9"	23'-11"	19'-2"
	18"	34'-10"	31'-9"	26'-10"	21'-6"	38'-1"	28'-9"	23'-11"	19'-2"
	20"	37'-8"	32'-6"	27'-1"	21'-8"	38'-4"	28'-9"	23'-11"	19'-2"
	22"	40'-5"	31'-6"	26'-3"	21'-0"	38'-4"	28'-9"	23'-11"	19'-2"
	24"	42'-0"	31'-6"	26'-3"	21'-0"	38'-4"	28'-9"	23'-11"	19'-2"

Read Design Notes on page 7

Bartel Engineering LLC

<http://www.bartelengineeringLLC.com>

301-332-9724

page 3 of 7



Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 19701, Expiration Date: July 7, 2024.

August 29, 2023

Maximum Floor Spans

MAX-CORE I-joists
manufactured by
IB EWP Inc.

Table IBU-MF4 - IB400, IB450, IB600, IB700 IB800 and IB900x Maximum Floor Spans

40 psf Live Load (3 1/2" end and interior bearing with bearing stiffeners)
30 psf Dead Load

Allowable Stress Design (ASD) 100% Load Duration (L/480 live load, L/240 total load deflection criteria)

I-Joist		23/32" OSB subfloor glued and nailed Spacing of IB joist (o.c.)							
Series	Depth	Simple Span				Multiple Spans			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
IB400	7 7/8"	15'-8"	13'-10"	12'-7"	11'-3"	15'-11"	13'-10"	12'-7"	11'-3"
	8 5/8"	16'-10"	14'-7"	13'-4"	11'-11"	16'-10"	14'-7"	13'-4"	11'-11"
	9 1/4"	17'-7"	15'-3"	13'-11"	12'-5"	17'-7"	15'-3"	13'-11"	12'-5"
	9 1/2"	17'-10"	15'-5"	14'-1"	12'-7"	17'-10"	15'-5"	14'-1"	12'-7"
	11 1/4"	19'-8"	17'-1"	15'-7"	13'-11"	19'-8"	17'-1"	15'-7"	13'-11"
	11 7/8"	20'-4"	17'-7"	16'-1"	14'-4"	20'-4"	17'-7"	16'-1"	14'-4"
	14"	22'-4"	19'-4"	17'-8"	15'-9"	22'-4"	19'-4"	17'-8"	15'-9"
	16"	24'-0"	20'-10"	19'-0"	17'-0"	24'-0"	20'-10"	19'-0"	17'-0"
IB450	9 1/2"	18'-3"	15'-9"	14'-5"	12'-10"	18'-3"	15'-9"	14'-5"	12'-10"
	11 7/8"	20'-9"	18'-0"	16'-5"	14'-8"	20'-9"	18'-0"	16'-5"	14'-8"
	14"	22'-6"	19'-6"	17'-10"	15'-11"	22'-6"	19'-6"	17'-10"	15'-11"
	16"	24'-0"	20'-10"	19'-0"	17'-0"	24'-0"	20'-10"	19'-0"	17'-0"
IB600	7 7/8"	16'-5"	15'-0"	14'-2"	13'-3"	17'-11"	16'-2"	14'-9"	12'-7"
	8 5/8"	17'-8"	16'-2"	15'-3"	14'-0"	19'-3"	17'-2"	15'-8"	13'-0"
	9 1/4"	18'-9"	17'-2"	16'-2"	14'-7"	20'-6"	17'-10"	16'-4"	14'-7"
	9 1/2"	19'-2"	17'-6"	16'-7"	14'-10"	20'-11"	18'-2"	16'-7"	14'-10"
	11 1/4"	21'-11"	20'-0"	18'-3"	16'-4"	23'-2"	20'-0"	18'-3"	16'-4"
	11 7/8"	22'-10"	20'-8"	18'-10"	16'-10"	23'-10"	20'-8"	18'-10"	16'-10"
	14"	25'-10"	22'-8"	20'-8"	18'-6"	26'-2"	22'-8"	20'-8"	18'-4"
	16"	28'-2"	24'-5"	22'-3"	19'-11"	28'-2"	24'-5"	22'-3"	19'-11"
	18"	30'-0"	26'-0"	23'-8"	21'-2"	30'-0"	26'-0"	23'-8"	19'-6"
	20"	31'-7"	27'-4"	24'-11"	22'-4"	31'-7"	27'-4"	24'-7"	19'-8"
IB700	9 1/2"	20'-0"	18'-3"	16'-9"	15'-0"	21'-3"	18'-5"	16'-9"	15'-0"
	11 7/8"	23'-9"	20'-11"	19'-1"	17'-1"	24'-2"	20'-11"	19'-1"	17'-1"
	14"	26'-7"	23'-0"	21'-0"	18'-9"	26'-7"	23'-0"	21'-0"	18'-9"
	16"	28'-7"	24'-9"	22'-7"	20'-2"	28'-7"	24'-9"	22'-7"	20'-2"
IB800	7 7/8"	18'-1"	16'-6"	15'-7"	14'-6"	19'-9"	18'-0"	15'-9"	12'-7"
	8 5/8"	19'-5"	17'-9"	16'-9"	15'-7"	21'-3"	19'-4"	16'-3"	13'-0"
	9 1/4"	20'-8"	18'-10"	17'-9"	16'-6"	22'-7"	20'-7"	19'-3"	15'-5"
	9 1/2"	21'-1"	19'-3"	18'-1"	16'-10"	23'-0"	21'-0"	19'-6"	15'-7"
	11 1/4"	24'-2"	22'-0"	20'-9"	19'-3"	26'-4"	23'-10"	21'-7"	17'-3"
	11 7/8"	25'-1"	22'-10"	21'-6"	20'-0"	27'-5"	24'-7"	22'-5"	18'-2"
	14"	28'-5"	25'-11"	24'-5"	22'-0"	31'-1"	27'-0"	24'-8"	20'-6"
	16"	31'-5"	28'-8"	26'-6"	23'-9"	33'-7"	29'-1"	26'-6"	22'-10"
	18"	35'-4"	30'-10"	28'-2"	25'-2"	35'-8"	30'-10"	28'-2"	24'-1"
	20"	37'-1"	32'-6"	29'-8"	26'-7"	37'-7"	32'-6"	29'-8"	24'-10"
IB900x	7 7/8"	18'-6"	16'-11"	15'-11"	14'-10"	20'-3"	18'-5"	17'-5"	15'-6"
	8 5/8"	19'-11"	18'-2"	17'-2"	16'-0"	21'-9"	19'-10"	18'-9"	16'-8"
	9 1/2"	21'-6"	19'-7"	18'-6"	17'-3"	23'-5"	21'-5"	20'-2"	18'-2"
	11 7/8"	25'-6"	23'-3"	21'-11"	20'-5"	27'-10"	25'-5"	23'-11"	19'-2"
	14"	28'-11"	26'-4"	24'-10"	23'-2"	31'-7"	28'-9"	25'-8"	20'-6"
	16"	31'-11"	29'-1"	27'-5"	25'-7"	34'-11"	31'-10"	28'-6"	22'-10"
	18"	34'-10"	31'-9"	30'-0"	27'-11"	38'-1"	34'-4"	30'-6"	24'-4"
	20"	37'-8"	34'-4"	32'-5"	29'-5"	41'-2"	36'-1"	32'-10"	26'-3"
	22"	40'-5"	36'-10"	34'-6"	30'-10"	43'-7"	37'-9"	34'-6"	27'-8"
	24"	43'-1"	39'-4"	35'-11"	32'-2"	45'-6"	39'-4"	35'-2"	28'-1"

Read Design Notes on page 7

Bartel Engineering LLC
<http://www.bartelengineeringLLC.com>
301-332-9724

page 4 of 7



Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 19701, Expiration Date: July 7, 2024.

August 29, 2023

Maximum Floor Spans

MAX-CORE I-joists
manufactured by
IB EWP Inc.

Table IBU-MF5 - IB400, IB450, IB600, IB700 IB800 and IB900x Maximum Floor Spans

100 psf Live Load (3 1/2" end and interior bearing with bearing stiffeners)
20 psf Dead Load

Allowable Stress Design (ASD) 100% Load Duration (L/480 live load, L/240 total load deflection criteria)

I-Joist		23/32" OSB subfloor glued and nailed Spacing of IB joist (o.c.)							
Series	Depth	Simple Span				Multiple Spans			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
IB400	7 7/8"	11'-3"	10'-3"	9'-7"	8'-7"	12'-2"	10'-6"	9'-2"	7'-4"
	8 5/8"	12'-1"	11'-0"	10'-2"	9'-1"	12'-10"	11'-2"	9'-6"	7'-7"
	9 1/4"	12'-10"	11'-7"	10'-7"	9'-6"	13'-5"	11'-6"	9'-7"	7'-8"
	9 1/2"	13'-2"	11'-9"	10'-9"	9'-7"	13'-7"	11'-9"	9'-10"	7'-10"
	11 1/4"	15'-0"	13'-0"	11'-11"	10'-7"	15'-0"	13'-0"	11'-7"	9'-3"
	11 7/8"	15'-6"	13'-5"	12'-3"	11'-0"	15'-6"	13'-5"	11'-8"	9'-4"
	14"	17'-0"	14'-9"	13'-5"	12'-0"	17'-0"	14'-1"	11'-9"	9'-5"
	16"	18'-4"	15'-10"	14'-6"	12'-11"	18'-4"	14'-3"	11'-10"	9'-6"
IB450	9 1/2"	13'-11"	12'-0"	11'-0"	9'-10"	13'-11"	12'-0"	11'-0"	9'-4"
	11 7/8"	15'-10"	13'-8"	12'-6"	11'-2"	15'-10"	13'-8"	12'-6"	10'-9"
	14"	17'-2"	14'-11"	13'-7"	12'-2"	17'-2"	14'-11"	13'-7"	12'-1"
	16"	18'-4"	15'-10"	14'-6"	12'-11"	18'-4"	15'-10"	14'-6"	12'-11"
IB600	7 7/8"	11'-10"	10'-9"	10'-1"	9'-4"	12'-10"	11'-0"	9'-2"	7'-4"
	8 5/8"	15'-1"	13'-1"	11'-11"	9'-6"	15'-1"	11'-5"	9'-6"	7'-7"
	9 1/4"	13'-6"	12'-3"	11'-7"	10'-8"	14'-9"	13'-4"	11'-3"	9'-0"
	9 1/2"	13'-10"	12'-7"	11'-10"	10'-11"	15'-0"	13'-8"	11'-5"	9'-1"
	11 1/4"	15'-10"	14'-4"	13'-6"	12'-6"	17'-3"	15'-1"	12'-7"	10'-1"
	11 7/8"	16'-5"	14'-11"	14'-1"	12'-10"	17'-11"	15'-4"	12'-9"	10'-3"
	14"	18'-8"	16'-11"	15'-10"	14'-1"	20'-0"	16'-0"	13'-4"	10'-8"
	16"	20'-8"	18'-8"	17'-0"	15'-3"	21'-6"	16'-9"	13'-11"	11'-2"
	18"	22'-8"	19'-10"	18'-1"	16'-2"	22'-10"	17'-1"	14'-3"	11'-5"
	20"	24'-1"	20'-10"	19'-0"	17'-0"	23'-0"	17'-3"	14'-4"	11'-6"
IB700	9 1/2"	14'-4"	13'-0"	12'-3"	11'-4"	15'-8"	14'-0"	11'-8"	9'-4"
	11 7/8"	17'-1"	15'-6"	14'-7"	13'-1"	18'-6"	16'-0"	13'-6"	10'-9"
	14"	19'-5"	17'-7"	16'-0"	14'-4"	20'-3"	17'-7"	15'-1"	12'-1"
	16"	21'-5"	18'-11"	17'-3"	15'-5"	21'-10"	18'-11"	16'-8"	13'-4"
IB800	7 7/8"	13'-0"	11'-9"	11'-1"	9'-5"	14'-2"	11'-0"	9'-2"	7'-4"
	8 5/8"	14'-0"	12'-8"	11'-11"	9'-6"	15'-2"	11'-5"	9'-6"	7'-7"
	9 1/4"	14'-10"	13'-5"	12'-8"	11'-6"	16'-2"	13'-6"	11'-3"	9'-0"
	9 1/2"	15'-2"	13'-9"	12'-11"	11'-8"	16'-6"	13'-8"	11'-5"	9'-1"
	11 1/4"	17'-4"	15'-9"	14'-9"	12'-10"	18'-11"	15'-1"	12'-7"	10'-1"
	11 7/8"	18'-0"	16'-4"	15'-4"	13'-3"	19'-8"	15'-10"	13'-3"	10'-7"
	14"	20'-6"	18'-7"	17'-5"	15'-3"	22'-4"	18'-0"	15'-0"	12'-0"
	16"	22'-8"	20'-7"	19'-3"	17'-1"	24'-8"	20'-0"	16'-8"	13'-4"
	18"	24'-10"	22'-6"	21'-2"	19'-2"	27'-1"	21'-1"	17'-7"	14'-1"
	20"	26'-9"	24'-3"	22'-8"	20'-3"	28'-8"	21'-9"	18'-1"	14'-6"
IB900x	7 7/8"	13'-4"	12'-1"	11'-5"	10'-7"	14'-6"	13'-2"	11'-4"	9'-0"
	8 5/8"	14'-4"	13'-0"	12'-3"	11'-4"	15'-8"	14'-2"	12'-2"	9'-9"
	9 1/2"	15'-6"	14'-1"	13'-3"	12'-3"	16'-11"	15'-4"	13'-3"	10'-7"
	11 7/8"	18'-5"	16'-9"	15'-9"	14'-7"	20'-1"	16'-9"	13'-11"	11'-2"
	14"	20'-11"	19'-0"	17'-10"	16'-4"	22'-9"	18'-0"	15'-0"	12'-0"
	16"	23'-1"	21'-0"	19'-9"	18'-3"	25'-2"	20'-0"	16'-8"	13'-4"
	18"	25'-3"	22'-11"	21'-7"	20'-0"	27'-6"	21'-4"	17'-9"	14'-2"
	20"	27'-4"	24'-9"	23'-4"	21'-7"	29'-9"	23'-0"	19'-2"	15'-4"
	22"	29'-4"	26'-7"	25'-0"	23'-3"	32'-0"	24'-3"	20'-2"	16'-2"
24"	31'-3"	28'-5"	26'-8"	24'-6"	32'-10"	24'-7"	20'-6"	16'-5"	

Read Design Notes on page 7

Bartel Engineering LLC
<http://www.bartelengineeringLLC.com>
301-332-9724

page 5 of 7



Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 19701, Expiration Date: July 7, 2024.

August 29, 2023

Maximum Floor Spans

MAX-CORE I-joists
manufactured by
IB EWP Inc.

Table IBU-MF6 - IB400, IB450, IB600, IB700 IB800 and IB900x Maximum Floor Spans

100 psf Live Load (3 1/2" end and interior bearing with bearing stiffeners)
30 psf Dead Load

Allowable Stress Design (ASD) 100% Load Duration (L/480 live load, L/240 total load deflection criteria)

I-Joist		23/32" OSB subfloor glued and nailed Spacing of IB joist (o.c.)							
Series	Depth	Simple Span				Multiple Spans			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
IB400	7 7/8"	11'-3"	10'-1"	9'-3"	8'-3"	11'-8"	10'-1"	8'-5"	6'-9"
	8 5/8"	12'-1"	10'-8"	9'-9"	8'-9"	12'-4"	10'-6"	8'-9"	7'-0"
	9 1/4"	12'-10"	11'-2"	10'-2"	8'-10"	12'-11"	10'-7"	8'-10"	7'-1"
	9 1/2"	13'-1"	11'-4"	10'-4"	9'-1"	13'-1"	10'-11"	9'-1"	7'-3"
	11 1/4"	14'-5"	12'-6"	11'-5"	10'-2"	14'-5"	12'-6"	10'-9"	8'-7"
	11 7/8"	14'-11"	12'-11"	11'-9"	10'-6"	14'-11"	12'-11"	10'-9"	8'-7"
	14"	16'-4"	14'-2"	12'-11"	11'-7"	16'-4"	13'-0"	10'-10"	8'-8"
	16"	17'-7"	15'-3"	13'-11"	12'-5"	17'-6"	13'-1"	10'-11"	8'-9"
IB450	9 1/2"	13'-4"	11'-7"	10'-7"	9'-5"	13'-4"	11'-7"	10'-7"	8'-7"
	11 7/8"	15'-3"	13'-2"	12'-0"	10'-9"	15'-3"	13'-2"	12'-0"	9'-11"
	14"	16'-6"	14'-4"	13'-1"	11'-8"	16'-6"	14'-4"	13'-1"	11'-2"
	16"	17'-7"	15'-3"	13'-11"	12'-3"	17'-7"	15'-3"	13'-11"	12'-3"
IB600	7 7/8"	11'-10"	10'-9"	10'-1"	8'-8"	12'-10"	10'-2"	8'-5"	6'-9"
	8 5/8"	12'-8"	11'-7"	10'-10"	8'-9"	13'-10"	10'-6"	8'-9"	7'-0"
	9 1/4"	13'-6"	12'-3"	11'-7"	10'-4"	14'-9"	12'-5"	10'-4"	8'-3"
	9 1/2"	13'-10"	12'-7"	11'-10"	10'-6"	15'-0"	12'-7"	10'-6"	8'-5"
	11 1/4"	15'-10"	14'-4"	13'-5"	11'-7"	17'-0"	13'-11"	11'-7"	9'-3"
	11 7/8"	16'-5"	14'-11"	13'-10"	12'-0"	17'-6"	14'-2"	11'-9"	9'-5"
	14"	18'-8"	16'-8"	15'-2"	13'-5"	19'-2"	14'-10"	12'-4"	9'-10"
	16"	20'-8"	17'-11"	16'-4"	14'-7"	20'-7"	15'-5"	12'-10"	10'-3"
	18"	22'-0"	19'-1"	17'-5"	15'-7"	21'-0"	15'-9"	13'-2"	10'-6"
	20"	23'-2"	20'-0"	18'-3"	16'-4"	21'-2"	15'-11"	13'-3"	10'-7"
IB700	9 1/2"	14'-4"	13'-0"	12'-3"	10'-8"	15'-7"	12'-11"	10'-9"	8'-7"
	11 7/8"	17'-1"	15'-4"	14'-0"	12'-4"	17'-9"	14'-11"	12'-5"	9'-11"
	14"	19'-5"	16'-10"	15'-5"	13'-9"	19'-6"	16'-9"	13'-11"	11'-2"
	16"	21'-0"	18'-2"	16'-7"	14'-10"	21'-0"	18'-2"	15'-4"	12'-3"
IB800	7 7/8"	13'-0"	11'-9"	11'-1"	8'-10"	13'-6"	10'-2"	8'-5"	6'-9"
	8 5/8"	14'-0"	12'-8"	11'-0"	8'-9"	14'-0"	10'-6"	8'-9"	7'-0"
	9 1/4"	14'-10"	13'-5"	12'-8"	10'-7"	16'-2"	12'-5"	10'-4"	8'-3"
	9 1/2"	15'-2"	13'-9"	12'-11"	10'-9"	16'-6"	12'-7"	10'-6"	8'-5"
	11 1/4"	17'-4"	15'-9"	14'-9"	11'-10"	18'-7"	13'-11"	11'-7"	9'-3"
	11 7/8"	18'-0"	16'-4"	15'-3"	12'-2"	19'-6"	14'-8"	12'-2"	9'-9"
	14"	20'-6"	18'-7"	17'-5"	14'-0"	22'-1"	16'-7"	13'-10"	11'-0"
	16"	22'-8"	20'-7"	19'-3"	15'-9"	24'-7"	18'-5"	15'-4"	12'-3"
	18"	24'-10"	22'-6"	20'-8"	17'-8"	26'-0"	19'-6"	16'-3"	13'-0"
	20"	26'-9"	23'-10"	21'-9"	19'-6"	26'-9"	20'-0"	16'-8"	13'-4"
IB900x	7 7/8"	13'-4"	12'-1"	11'-5"	10'-4"	14'-6"	12'-6"	10'-5"	8'-4"
	8 5/8"	14'-4"	13'-0"	12'-3"	11'-0"	15'-8"	13'-6"	11'-3"	9'-0"
	9 1/2"	15'-6"	14'-1"	13'-3"	11'-11"	16'-11"	14'-8"	12'-2"	9'-9"
	11 7/8"	18'-5"	16'-9"	15'-9"	14'-3"	20'-1"	15'-5"	12'-10"	10'-3"
	14"	20'-11"	19'-0"	17'-10"	15'-0"	22'-1"	16'-7"	13'-10"	11'-0"
	16"	23'-1"	21'-0"	19'-9"	17'-11"	24'-7"	18'-5"	15'-4"	12'-3"
	18"	25'-3"	22'-11"	21'-7"	19'-3"	26'-3"	19'-8"	16'-5"	13'-1"
	20"	27'-4"	24'-9"	23'-4"	20'-7"	28'-3"	21'-2"	17'-8"	14'-1"
	22"	29'-4"	26'-7"	25'-0"	21'-8"	29'-10"	22'-4"	18'-8"	14'-11"
24"	31'-3"	28'-5"	26'-4"	22'-9"	30'-3"	22'-8"	18'-11"	15'-1"	

Read Design Notes on page 7

Bartel Engineering LLC
<http://www.bartelengineeringLLC.com>
301-332-9724

page 6 of 7



Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 19701, Expiration Date: July 7, 2024.

August 29, 2023

Design Notes:

1. Tabulated spans have been designed to meet IBC/IRC-2021 and NDS-2018 requirements.
2. Allowable spans are applicable to floor construction. The live load and dead load deflection limits are indicated at the top of the span table.
3. Spans are based on partial composite action with glued and nailed subfloor meeting requirements for APA Span-Rated STURD-I-FLOOR conforming to PRP-108, PS 1, PS 2, CSA 0325, or CSA 0437. Construction adhesive shall meet the requirements given in ASTM D3498 or APA Specification AFG-01.
4. Minimum bearing length shall be 1 $\frac{3}{4}$ " for end bearing and 3 $\frac{1}{2}$ " for interior bearings without bearing stiffeners for tables IBU-MF1 thru IBU-MF3, and 3 $\frac{1}{2}$ inches (with bearing stiffeners) for all bearings for tables IBU-MF4 thru IBU-MF6. Allowable design spans in the table are measured from centerline of supports.
5. Bearing stiffeners are not required for tables IBU-MF1 thru IBU-MF3, except as required by hanger manufacturers.
6. This span table is based on uniform loads. For applications with other than uniformly distributed loads, or other applications beyond the scope of the indicated design criteria, an engineering analysis may be required. Design properties are indicated in APA Product Report PR-L330 (Revised June 15, 2023). For technical support, contact IB EWP Inc., or your local IB EWP Inc. distributor.
7. Multiple spans given in tables IBU-MF1 thru IBU-MF6 are the longest spans measured between centerline of bearings for a joist with three bearings. The ratio of the shorter span to the longer span must be greater than 40%. For two spans with a ratio between 40% and 80%, provide metal hangers or equivalent to withstand an uplift force at the end of the shorter span. Calculate uplift force at the end of the shorter span when the longer span (only) is loaded with live load.
8. Continuous lateral support must be provided for the top and bottom flanges on the compression edge. Continuous lateral support is considered to be a maximum unbraced length of 24 inches. This is normally provided by sheathing and/or framing members, which must be adequately anchored to the member and supporting structure.
9. Web filler is required for I-joists seated in hangers where the top flange is not laterally supported.
10. Lateral support must be provided at all bearing locations to prevent lateral displacement and rotation.
11. I-joists shall be used in a dry, well ventilated environment where the average moisture content will not exceed 16%.
12. Point loads from above over bearing supports shall be properly transferred by squash blocks or pass-thru framing.

