

I-JOIST DESIGN GUIDE

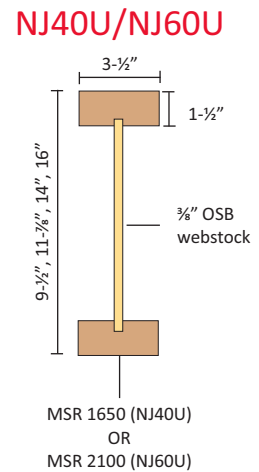
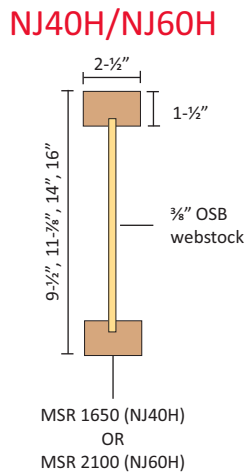
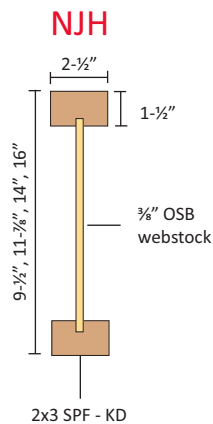
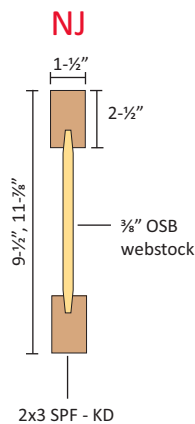
THE MOST COST-EFFECTIVE FLOORS START WITH I-JOISTS FROM KOTT

With our range of I-Joist products, KOTT has you covered for all performance and price points.

Our Design team will select the best combination of I-Joist products to value-engineer your floor for your application. This means we will meet or exceed your performance specifications, and by optimizing material and minimizing waste, will do so at the lowest possible price.

KOTT I-Joist Products

	NASCOR Original		MSR Flange I-Joists			
	NJ	NJH	NJ40H	NJ60H	NJ40U	NJ60U
Best-suited for these applications						
Shorter spans, simple	●	●	●			
Longer spans, simple or continuous			●	●	●	●
For heavy loads/long spans				●	●	●
Where large holes are specified in design		●	●	●	●	●
Depths available						
9-½"	●	●	●	●	●	●
11-¾"	●	●	●	●	●	●
14"		●	●	●	●	●
16"		●	●	●	●	●
Flange						
Size	2x3 Vertical	2x3	2x3	2x3	2x4	2x4
Material	SPF - KD	SPF - KD	MSR 1650	MSR 2100	MSR 1650	MSR 2100



Simple Span: 40 PSF LL/15 PSF DL (L/360), 5/8" OSB sheathing, nailed and glued

		Bare Joist				Ceiling			
Joist series	Joist Depth	12"	16"	19.2"	24"	12"	16"	19.2"	24"
NASCOR ORIGINAL I-JOISTS									
NJ	9-1/2"	15'-1"	14'-3"	13'-9"	-	15'-6"	14'-8"	14'-3"	-
	11-7/8"	17'-0"	16'-1"	15'-6"	-	17'-6"	16'-7"	16'-0"	-
NJH	9-1/2"	15'-8"	14'-9"	14'-3"	-	16'-1"	15'-2"	14'-8"	-
	11-7/8"	17'-6"	16'-6"	16'-0"	-	18'-1"	17'-1"	16'-6"	-
	14"	19'-2"	17'-10"	17'-3"	-	19'-11"	18'-6"	17'-9"	-
	16"	20'-10"	19'-4"	18'-6"	-	21'-8"	20'-2"	19'-4"	-
MSR FLANGE I-JOISTS									
NJ40H	9-1/2"	16'-0"	15'-1"	14'-7"	-	16'-5"	15'-6"	15'-0"	-
	11-7/8"	17'-11"	16'-11"	16'-4"	-	18'-6"	17'-5"	16'-10"	-
	14"	19'-10"	18'-5"	17'-9"	-	20'-7"	19'-2"	18'-4"	-
	16"	21'-7"	20'-1"	19'-2"	-	22'-5"	20'-10"	20'-0"	-
NJ60H	9-1/2"	16'-5"	15'-6"	15'-0"	-	16'-10"	15'-11"	15'-4"	-
	11-7/8"	18'-6"	17'-4"	16'-9"	-	19'-2"	17'-10"	17'-3"	-
	14"	20'-7"	19'-1"	18'-3"	-	21'-3"	19'-9"	18'-11"	-
	16"	22'-5"	20'-9"	19'-10"	-	23'-2"	21'-6"	20'-7"	-
NJ40U	9-1/2"	16'-10"	15'-11"	15'-4"	-	17'-3"	16'-3"	15'-9"	-
	11-7/8"	19'-2"	17'-10"	17'-3"	-	19'-9"	18'-4"	17'-8"	-
	14"	21'-3"	19'-8"	18'-10"	-	21'-11"	20'-4"	19'-6"	-
	16"	23'-2"	21'-5"	20'-6"	-	23'-11"	22'-2"	21'-2"	-
NJ60U	9-1/2"	17'-5"	16'-5"	15'-10"	-	17'-9"	16'-9"	16'-2"	-
	11-7/8"	19'-11"	18'-5"	17'-9"	-	20'-6"	19'-0"	18'-1"	-
	14"	22'-1"	20'-5"	19'-6"	-	22'-9"	21'-1"	20'-2"	-
	16"	24'-1"	22'-3"	21'-3"	-	24'-9"	22'-11"	21'-11"	-

Definitions:

Ceiling

1/2" gypsum board applied to Joist or 1x4 strapping @ 24" o.c.

1 Row Blocking

blocking panel at midspan

1 Row Blocking & 1 Strapping

blocking panel at midspan; 1x4 strapping at midspan

1 Row Blocking & Ceiling

blocking panel at midspan; 1/2" gypsum board applied to Joist

3 Rows Blocking

for Nascor Original, blocking panels at midspan and each 1/3 of the span

for MSR flange I-Joists, blocking panels at each 1/4 of the span

3 Rows Blocking & 3 Strapping

for Nascor Original, blocking panels and 1x4 strapping at midspan and each 1/3 of the span

for MSR flange I-Joists, blocking panels and 1x4 strapping at each 1/4 of the span

3 Rows Blocking & Ceiling

for Nascor Original, blocking panels at midspan and each 1/3 of the span; 1/2" gypsum board applied to Joist

for MSR flange I-Joists, blocking panels at each 1/4 of the span; 1/2" gypsum board applied to Joist

Simple Span: 40 PSF LL/15 PSF DL (L/360), 5/8" OSB sheathing, nailed and glued

		1 Row Blocking				1 Row Blocking & 1 Strapping			
Joist series	Joist Depth	12"	16"	19.2"	24"	12"	16"	19.2"	24"
NASCOR ORIGINAL I-JOISTS									
NJ	9-1/2"	16'-0"	15'-2"	14'-4"	-	16'-10"	15'-3"	14'-4"	-
	11-7/8"	18'-2"	17'-2"	16'-8"	-	19'-7"	18'-3"	16'-10"	-
NJH	9-1/2"	16'-7"	15'-8"	15'-2"	-	17'-6"	16'-7"	15'-6"	-
	11-7/8"	18'-11"	17'-8"	17'-1"	-	20'-4"	18'-11"	18'-1"	-
	14"	20'-11"	19'-6"	18'-8"	-	22'-8"	21'-0"	20'-1"	-
	16"	22'-11"	21'-4"	20'-5"	-	24'-11"	23'-2"	22'-1"	-
MSR FLANGE I-JOISTS									
NJ40H	9-1/2"	16'-11"	16'-0"	15'-6"	-	17'-9"	16'-10"	16'-1"	-
	11-7/8"	19'-4"	18'-0"	17'-5"	-	20'-9"	19'-3"	18'-5"	-
	14"	21'-8"	20'-1"	19'-3"	-	23'-4"	21'-8"	20'-8"	-
	16"	23'-8"	22'-1"	21'-1"	-	25'-8"	23'-10"	22'-9"	-
NJ60H	9-1/2"	17'-5"	16'-5"	15'-11"	-	18'-3"	17'-3"	16'-8"	-
	11-7/8"	20'-0"	18'-7"	17'-11"	-	21'-5"	19'-11"	19'-0"	-
	14"	22'-5"	20'-10"	19'-11"	-	24'-1"	22'-5"	21'-5"	-
	16"	24'-7"	22'-10"	21'-10"	-	26'-7"	24'-8"	23'-6"	-
NJ40U	9-1/2"	17'-10"	16'-10"	16'-3"	-	18'-10"	17'-8"	17'-1"	-
	11-7/8"	20'-8"	19'-2"	18'-5"	-	22'-1"	20'-6"	19'-7"	-
	14"	23'-1"	21'-6"	20'-6"	-	24'-10"	23'-1"	22'-0"	-
	16"	25'-4"	23'-6"	22'-5"	-	27'-4"	25'-4"	24'-2"	-
NJ60U	9-1/2"	18'-5"	17'-4"	16'-9"	-	19'-7"	18'-2"	17'-6"	-
	11-7/8"	21'-5"	19'-11"	19'-0"	-	22'-11"	21'-3"	20'-3"	-
	14"	24'-0"	22'-3"	21'-3"	-	25'-9"	23'-10"	22'-9"	-
	16"	26'-3"	24'-4"	23'-3"	-	28'-4"	26'-3"	25'-0"	-

Simple Span: 40 PSF LL/15 PSF DL (L/360), 5/8" OSB sheathing, nailed and glued

		1 Row Blocking & Ceiling				3 Rows Blocking			
Joist series	Joist Depth	12"	16"	19.2"	24"	12"	16"	19.2"	24"
NASCOR ORIGINAL I-JOISTS									
NJ	9-1/2"	16'-10"	15'-3"	14'-4"	-	16'-10"	15'-3"	14'-4"	-
	11-7/8"	20'-3"	18'-5"	16'-10"	-	19'-7"	18'-2"	16'-10"	-
NJH	9-1/2"	17'-10"	16'-7"	15'-6"	-	17'-5"	16'-6"	15'-6"	-
	11-7/8"	20'-11"	19'-6"	18'-4"	-	20'-3"	18'-10"	18'-0"	-
	14"	23'-4"	21'-9"	20'-10"	-	22'-7"	21'-0"	20'-1"	-
	16"	25'-8"	24'-0"	22'-11"	-	24'-10"	23'-1"	22'-1"	-
MSR FLANGE I-JOISTS									
NJ40H	9-1/2"	17'-4"	16'-5"	15'-11"	-	17'-5"	16'-6"	16'-0"	-
	11-7/8"	19'-11"	18'-7"	17'-11"	-	20'-2"	18'-9"	18'-0"	-
	14"	22'-4"	20'-10"	20'-0"	-	22'-8"	21'-1"	20'-2"	-
	16"	24'-6"	22'-10"	21'-11"	-	24'-11"	23'-2"	22'-1"	-
NJ60H	9-1/2"	17'-9"	16'-10"	16'-3"	-	17'-11"	16'-11"	16'-5"	-
	11-7/8"	20'-7"	19'-2"	18'-5"	-	20'-11"	19'-5"	18'-7"	-
	14"	23'-1"	21'-6"	20'-7"	-	23'-5"	21'-9"	20'-10"	-
	16"	25'-3"	23'-7"	22'-7"	-	25'-9"	23'-11"	22'-10"	-
NJ40U	9-1/2"	18'-2"	17'-2"	16'-8"	-	18'-5"	17'-4"	16'-9"	-
	11-7/8"	21'-3"	19'-9"	18'-11"	-	21'-7"	20'-0"	19'-2"	-
	14"	23'-9"	22'-1"	21'-2"	-	24'-2"	22'-5"	21'-5"	-
	16"	26'-0"	24'-2"	23'-2"	-	26'-6"	24'-7"	23'-6"	-
NJ60U	9-1/2"	18'-10"	17'-8"	17'-1"	-	19'-1"	17'-10"	17'-3"	-
	11-7/8"	22'-0"	20'-5"	19'-7"	-	22'-4"	20'-9"	19'-10"	-
	14"	24'-7"	22'-10"	21'-10"	-	25'-1"	23'-3"	22'-2"	-
	16"	26'-11"	25'-0"	23'-11"	-	27'-6"	25'-6"	24'-4"	-

Simple Span: 40 PSF LL/15 PSF DL (L/360), 5/8" OSB sheathing, nailed and glued

		3 Rows Blocking & 3 Strapping				3 Rows Blocking & Ceiling			
Joist series	Joist Depth	12"	16"	19.2"	24"	12"	16"	19.2"	24"
NASCOR ORIGINAL I-JOISTS									
NJ	9-1/2"	16'-10"	15'-3"	14'-4"	-	16'-10"	15'-3"	14'-4"	-
	11-7/8"	20'-6"	18'-5"	16'-10"	-	20'-6"	18'-5"	16'-10"	-
NJH	9-1/2"	18'-4"	16'-7"	15'-6"	-	18'-4"	16'-7"	15'-6"	-
	11-7/8"	21'-11"	19'-10"	18'-4"	-	21'-11"	19'-10"	18'-4"	-
	14"	24'-7"	22'-3"	20'-10"	-	24'-7"	22'-3"	20'-10"	-
	16"	27'-3"	24'-8"	23'-1"	-	27'-3"	24'-8"	23'-1"	-
MSR FLANGE I-JOISTS									
NJ40H	9-1/2"	18'-11"	17'-1"	16'-1"	-	17'-10"	16'-11"	16'-1"	-
	11-7/8"	22'-6"	20'-6"	19'-3"	-	20'-10"	19'-5"	18'-7"	-
	14"	25'-7"	23'-4"	21'-5"	-	23'-4"	21'-10"	20'-10"	-
	16"	28'-5"	25'-3"	23'-1"	-	25'-8"	23'-11"	22'-11"	-
NJ60H	9-1/2"	19'-8"	18'-2"	17'-0"	-	18'-4"	17'-4"	16'-9"	-
	11-7/8"	23'-3"	21'-7"	20'-4"	-	21'-6"	20'-0"	19'-2"	-
	14"	26'-4"	24'-5"	23'-2"	-	24'-1"	22'-6"	21'-6"	-
	16"	29'-3"	27'-1"	25'-2"	-	26'-6"	24'-8"	23'-7"	-
NJ40U	9-1/2"	20'-2"	18'-9"	17'-10"	-	18'-11"	17'-8"	17'-1"	-
	11-7/8"	23'-11"	22'-2"	21'-1"	-	22'-1"	20'-7"	19'-8"	-
	14"	27'-1"	25'-1"	23'-10"	-	24'-10"	23'-1"	22'-1"	-
	16"	30'-0"	27'-10"	26'-5"	-	27'-3"	25'-4"	24'-3"	-
NJ60U	9-1/2"	20'-11"	19'-5"	18'-6"	-	19'-7"	18'-2"	17'-7"	-
	11-7/8"	24'-9"	22'-11"	21'-9"	-	22'-11"	21'-3"	20'-4"	-
	14"	28'-0"	25'-11"	24'-7"	-	25'-8"	23'-10"	22'-9"	-
	16"	31'-0"	28'-9"	27'-3"	-	28'-2"	26'-2"	25'-0"	-

Definitions:

Ceiling

1/2" gypsum board applied to Joist or 1x4 strapping @ 24" o.c.

1 Row Blocking

blocking panel at midspan

1 Row Blocking & 1 Strapping

blocking panel at midspan; 1x4 strapping at midspan

1 Row Blocking & Ceiling

blocking panel at midspan; 1/2" gypsum board applied to Joist

3 Rows Blocking

for Nascor Original, blocking panels at midspan and each 1/3 of the span

for MSR flange I-Joists, blocking panels at each 1/4 of the span

3 Rows Blocking & 3 Strapping

for Nascor Original, blocking panels and 1x4 strapping at midspan and each 1/3 of the span

for MSR flange I-Joists, blocking panels and 1x4 strapping at each 1/4 of the span

3 Rows Blocking & Ceiling

for Nascor Original, blocking panels at midspan and each 1/3 of the span; 1/2" gypsum board applied to Joist

for MSR flange I-Joists, blocking panels at each 1/4 of the span; 1/2" gypsum board applied to Joist

Simple Span: 40 PSF LL/15 PSF DL (L/360), 3/4" OSB sheathing, nailed and glued

		Bare Joist				Ceiling			
Joist series	Joist Depth	12"	16"	19.2"	24"	12"	16"	19.2"	24"
NASCOR ORIGINAL I-JOISTS									
NJ	9-1/2"	15'-11"	15'-0"	14'-4"	13'-2"	16'-4"	15'-3"	14'-4"	13'-2"
	11-7/8"	17'-11"	16'-11"	16'-4"	15'-0"	18'-6"	17'-5"	16'-10"	15'-0"
NJH	9-1/2"	16'-6"	15'-7"	15'-0"	13'-10"	16'-11"	16'-0"	15'-5"	13'-10"
	11-7/8"	18'-7"	17'-5"	16'-9"	16'-1"	19'-3"	17'-11"	17'-3"	16'-5"
	14"	20'-5"	19'-0"	18'-1"	17'-4"	21'-2"	19'-8"	18'-10"	17'-11"
	16"	22'-3"	20'-8"	19'-8"	18'-8"	23'-0"	21'-5"	20'-6"	19'-5"
MSR FLANGE I-JOISTS									
NJ40H	9-1/2"	16'-10"	15'-10"	15'-4"	14'-8"	17'-3"	16'-3"	15'-8"	14'-10"
	11-7/8"	19'-0"	17'-9"	17'-1"	16'-5"	19'-8"	18'-3"	17'-7"	16'-11"
	14"	21'-2"	19'-7"	18'-9"	17'-10"	21'-10"	20'-4"	19'-5"	18'-5"
	16"	23'-0"	21'-4"	20'-5"	19'-4"	23'-10"	22'-2"	21'-2"	20'-1"
NJ60H	9-1/2"	17'-4"	16'-4"	15'-9"	15'-1"	17'-8"	16'-9"	16'-1"	15'-5"
	11-7/8"	19'-9"	18'-4"	17'-7"	16'-10"	20'-4"	18'-11"	18'-1"	17'-4"
	14"	21'-11"	20'-4"	19'-5"	18'-4"	22'-7"	21'-0"	20'-0"	19'-0"
	16"	23'-11"	22'-2"	21'-1"	20'-0"	24'-7"	22'-11"	21'-10"	20'-8"
NJ40U	9-1/2"	17'-9"	16'-9"	16'-1"	15'-5"	18'-1"	17'-1"	16'-6"	15'-9"
	11-7/8"	20'-5"	18'-11"	18'-1"	17'-4"	21'-0"	19'-5"	18'-7"	17'-8"
	14"	22'-8"	21'-0"	20'-0"	18'-11"	23'-3"	21'-7"	20'-7"	19'-6"
	16"	24'-8"	22'-10"	21'-9"	20'-7"	25'-4"	23'-6"	22'-5"	21'-3"
NJ60U	9-1/2"	18'-4"	17'-3"	16'-7"	15'-11"	18'-10"	17'-7"	16'-11"	16'-3"
	11-7/8"	21'-3"	19'-7"	18'-8"	17'-9"	21'-9"	20'-2"	19'-2"	18'-2"
	14"	23'-7"	21'-9"	20'-9"	19'-7"	24'-2"	22'-4"	21'-4"	20'-2"
	16"	25'-8"	23'-8"	22'-7"	21'-4"	26'-3"	24'-4"	23'-3"	22'-0"

Simple Span: 40 PSF LL/15 PSF DL (L/360), 3/4" OSB sheathing, nailed and glued

		1 Row Blocking				1 Row Blocking & 1 Strapping			
Joist series	Joist Depth	12"	16"	19.2"	24"	12"	16"	19.2"	24"
NASCOR ORIGINAL I-JOISTS									
NJ	9-1/2"	16'-8"	15'-3"	14'-4"	13'-2"	16'-10"	15'-3"	14'-4"	13'-2"
	11-7/8"	19'-1"	17'-10"	16'-10"	15'-0"	20'-4"	18'-5"	16'-10"	15'-0"
NJH	9-1/2"	17'-3"	16'-4"	15'-6"	13'-10"	18'-1"	16'-7"	15'-6"	13'-10"
	11-7/8"	19'-10"	18'-6"	17'-9"	16'-5"	21'-1"	19'-8"	18'-4"	16'-5"
	14"	21'-11"	20'-5"	19'-6"	18'-7"	23'-5"	21'-10"	20'-10"	19'-3"
	16"	24'-0"	22'-4"	21'-4"	20'-2"	25'-8"	24'-0"	22'-10"	21'-3"
MSR FLANGE I-JOISTS									
NJ40H	9-1/2"	17'-7"	16'-8"	16'-1"	14'-10"	18'-5"	17'-1"	16'-1"	14'-10"
	11-7/8"	20'-3"	18'-11"	18'-1"	17'-4"	21'-6"	20'-1"	19'-2"	17'-5"
	14"	22'-8"	21'-1"	20'-2"	19'-2"	24'-1"	22'-6"	21'-6"	19'-0"
	16"	24'-10"	23'-1"	22'-1"	20'-5"	26'-6"	24'-9"	23'-1"	20'-5"
NJ60H	9-1/2"	18'-1"	17'-1"	16'-6"	15'-9"	19'-1"	17'-10"	17'-0"	15'-9"
	11-7/8"	21'-0"	19'-7"	18'-8"	17'-10"	22'-3"	20'-9"	19'-9"	18'-9"
	14"	23'-6"	21'-10"	20'-10"	19'-9"	24'-11"	23'-3"	22'-2"	21'-0"
	16"	25'-8"	23'-11"	22'-10"	21'-7"	27'-5"	25'-6"	24'-4"	22'-6"
NJ40U	9-1/2"	18'-8"	17'-6"	16'-11"	16'-3"	19'-7"	18'-3"	17'-7"	16'-6"
	11-7/8"	21'-8"	20'-2"	19'-3"	18'-3"	22'-11"	21'-4"	20'-5"	19'-4"
	14"	24'-3"	22'-6"	21'-6"	20'-4"	25'-9"	23'-11"	22'-10"	21'-7"
	16"	26'-5"	24'-7"	23'-6"	22'-3"	28'-2"	26'-3"	25'-0"	23'-8"
NJ60U	9-1/2"	19'-4"	18'-0"	17'-4"	16'-8"	20'-4"	18'-11"	18'-1"	17'-4"
	11-7/8"	22'-6"	20'-11"	19'-11"	18'-11"	23'-9"	22'-1"	21'-1"	19'-11"
	14"	25'-1"	23'-4"	22'-3"	21'-1"	26'-8"	24'-9"	23'-7"	22'-4"
	16"	27'-6"	25'-6"	24'-4"	23'-0"	29'-3"	27'-2"	25'-11"	24'-6"

Definitions:

Ceiling

1/2" gypsum board applied to Joist or 1x4 strapping @ 24" o.c.

1 Row Blocking

blocking panel at midspan

1 Row Blocking & 1 Strapping

blocking panel at midspan; 1x4 strapping at midspan

1 Row Blocking & Ceiling

blocking panel at midspan; 1/2" gypsum board applied to Joist

3 Rows Blocking

for Nascor Original, blocking panels at midspan and each 1/3 of the span

for MSR flange I-Joists, blocking panels at each 1/4 of the span

3 Rows Blocking & 3 Strapping

for Nascor Original, blocking panels and 1x4 strapping at midspan and each 1/3 of the span

for MSR flange I-Joists, blocking panels and 1x4 strapping at each 1/4 of the span

3 Rows Blocking & Ceiling

for Nascor Original, blocking panels at midspan and each 1/3 of the span; 1/2" gypsum board applied to Joist

for MSR flange I-Joists, blocking panels at each 1/4 of the span; 1/2" gypsum board applied to Joist

Simple Span: 40 PSF LL/15 PSF DL (L/360), 3/4" OSB sheathing, nailed and glued

		1 Row Blocking & Ceiling				3 Rows Blocking			
Joist series	Joist Depth	12"	16"	19.2"	24"	12"	16"	19.2"	24"
NASCOR ORIGINAL I-JOISTS									
NJ	9-1/2"	16'-10"	15'-3"	14'-4"	13'-2"	16'-10"	15'-3"	14'-4"	13'-2"
	11-7/8"	20'-6"	18'-5"	16'-10"	15'-0"	20'-3"	18'-5"	16'-10"	15'-0"
NJH	9-1/2"	18'-4"	16'-7"	15'-6"	13'-10"	18'-0"	16'-7"	15'-6"	13'-10"
	11-7/8"	21'-8"	19'-10"	18'-4"	16'-5"	21'-1"	19'-8"	18'-4"	16'-5"
	14"	24'-1"	22'-3"	20'-10"	19'-3"	23'-5"	21'-10"	20'-10"	19'-3"
	16"	26'-6"	24'-8"	23'-1"	21'-3"	25'-8"	23'-11"	22'-10"	21'-3"
MSR FLANGE I-JOISTS									
NJ40H	9-1/2"	18'-0"	17'-1"	16'-1"	14'-10"	18'-1"	17'-1"	16'-1"	14'-10"
	11-7/8"	20'-11"	19'-6"	18'-8"	17'-5"	21'-0"	19'-7"	18'-9"	17'-5"
	14"	23'-4"	21'-10'	20'-11"	19'-0"	23'-7"	22'-0"	21'-0"	19'-0"
	16"	25'-7"	23'-11"	22'-10"	20'-5"	25'-10"	24'-1"	23'-0"	20'-5"
NJ60H	9-1/2"	18'-7"	17'-6"	16'-11"	15'-9"	18'-8"	17'-7"	16'-11"	15'-9"
	11-7/8"	21'-7"	20'-2"	19'-3"	18'-3"	21'-9"	20'-3"	19'-4"	18'-4"
	14"	24'-1"	22'-6"	21'-6"	20'-5"	24'-5"	22'-9"	21'-8"	20'-6"
	16"	26'-5"	24'-8"	23'-7"	22'-4"	26'-9"	24'-11"	23'-9"	22'-6"
NJ40U	9-1/2"	19'-1"	17'-10"	17'-3"	16'-6"	19'-3"	18'-0"	17'-4"	16'-6"
	11-7/8"	22'-3"	20'-9"	19'-9"	18'-9"	22'-6"	20'-11"	19'-11"	18'-11"
	14"	24'-10"	23'-2"	22'-1'	21'-0"	25'-2"	23'-5"	22'-4"	21'-2"
	16"	27'-1"	25'-4"	24'-2"	22'-11"	27'-6"	25'-7"	24'-5"	23'-1"
NJ60U	9-1/2"	19'-9"	18'-5"	17'-8"	17'-0"	20'-0"	18'-7"	17'-10"	17'-1"
	11-7/8"	23'-0"	21'-5"	20'-5"	19'-5"	23'-3"	21'-8"	20'-8"	19'-7"
	14"	25'-8"	23'-11"	22'-10"	21'-8"	26'-1"	24'-3"	23'-1"	21'-10"
	16"	28'-1"	26'-2"	25'-0"	23'-8"	28'-7"	26'-7"	25'-4"	23'-11"

Simple Span: 40 PSF LL/15 PSF DL (L/360), 3/4" OSB sheathing, nailed and glued

		3 Rows Blocking & 3 Strapping				3 Rows Blocking & Ceiling			
Joist series	Joist Depth	12"	16"	19.2"	24"	12"	16"	19.2"	24"
NASCOR ORIGINAL I-JOISTS									
NJ	9-1/2"	16'-10"	15'-3"	14'-4"	13'-2"	16'-10"	15'-3"	14'-4"	13'-2"
	11-7/8"	20'-6"	18'-5"	16'-10"	15'-0"	20'-6"	18'-5"	16'-10"	15'-0"
NJH	9-1/2"	18'-4"	16'-7"	15'-6"	13'-10"	18'-4"	16'-7"	15'-6"	13'-10"
	11-7/8"	21'-11"	19'-10"	18'-4"	16'-5"	21'-11"	19'-10"	18'-4"	16'-5"
	14"	24'-7"	22'-3"	20'-10"	19'-3"	24'-7"	22'-3"	20'-10"	19'-3"
	16"	27'-3"	24'-8"	23'-1"	21'-3"	27'-3"	24'-8"	23'-1"	21'-3"
MSR FLANGE I-JOISTS									
NJ40H	9-1/2"	18'-11"	17'-1"	16'-1"	14'-10"	18'-7"	17'-1"	16'-1"	14'-10"
	11-7/8"	22'-8"	20'-6"	19'-3"	17'-5"	21'-8"	20'-3"	19'-3"	17'-5"
	14"	25'-9"	23'-4"	21'-5"	19'-0"	24'-3"	22'-8"	21'-5"	19'-0"
	16"	28'-7"	25'-3"	23'-1"	20'-5"	26'-7"	24'-11'	23'-1"	20'-5"
NJ60H	9-1/2"	20'-1"	18'-2"	17'-0"	15'-9"	19'-2"	17'-11"	17'-0"	15'-9"
	11-7/8"	23'-9"	21'-8"	20'-4"	18'-10"	22'-4"	20'-11"	19'-11"	18'-10"
	14"	26'-9"	24'-8"	23'-2"	20'-11"	25'-0"	23'-5"	22'-4"	20'-11"
	16"	29'-6"	27'-5"	25'-2"	22'-6"	27'-5"	25'-8"	24'-6"	22'-6"
NJ40U	9-1/2"	20'-9"	19'-0"	17'-10"	16'-6"	19'-8"	18'-5"	17'-8"	16'-6"
	11-7/8"	24'-5"	22'-9"	21'-5"	19'-9"	23'-0"	21'-6"	20'-6"	19'-5"
	14"	27'-6"	25-8"	24'-4"	22'-6"	25'-9"	24'-1"	23'-0"	21'-9"
	16"	30'-4"	28'-4"	26'-11"	24'-5"	28'-2"	26'-4"	25'-2"	23'-10"
NJ60U	9-1/2"	21'-6"	20'-0"	18'-11"	17'-6"	20'-5"	19'-0"	18'-2"	17'-5"
	11-7/8"	25'-3"	23'-7"	22'-5"	20'-11"	23'-9"	22'-2"	21'-2"	20'-1"
	14"	28'-6"	26'-7"	25'-3"	23'-9"	26'-7"	24'-10"	23'-8"	22'-5"
	16"	31'-5"	29'-4"	27'-10"	25'-5"	29'-2"	27'-3"	26'-0"	24'-7"

Notes on Span Charts:

- Contact KOTT for spans or other conditions not shown here.
- Maximum spans in the tables have been determined in accordance with NBC 2010, CSA O86-09 "Engineering Design in Wood" and the vibration criteria outlined by the CCMC.
- Maximum spans in the tables are clear spans, measured between inside surfaces of end bearings.
- Deflection due to live load is limited to L/360.
- Deflection due to total load is limited to L/240.
- Where the subfloor is field-glued to the I-Joists, an adhesive complying with standard ASTM D3498 "Standard specification for Adhesives for Field-Gluing Plywood to Lumber Framing for Floor Systems" shall be used.
- Where a blocking panel is specified, it shall consist of an I-Joist block of the same depth as the floor Joists and installed as per details on the Installation Guide.
- Minimum end bearing length is 1-1/2". Values that are shaded for Nascor Original products have a minimum end bearing length of 2-1/2". Values that are shaded for MSR Flange products have a minimum end bearing length of 3-1/2".
- Lateral support must be provided for the compression edge and also at the bearings to prevent lateral displacement or rotation.

ALLOWABLE ROUND HOLE LOCATIONS

Simple Span for Live Loads up to 40 PSF and Dead Loads up to 25 PSF

		NJ SERIES PRODUCTS									
Joist Depth	Clear Span	Hole Diameter									
		2"	2.5"	3"	3.5"	4"	4.5"	5"	5.5"	6"	6.375"
		Minimum Distance from The Inside Edge of The Support to Center of The Hole									
9-1/2"	6'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	-	-	-	-
	8'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	-	-	-	-
	10'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	-	-	-	-
	12'	1'-0"	1'-0"	1'-0"	1'-2"	1'-8"	-	-	-	-	-
	14'	1'-0"	1'-5"	1'-10"	2'-3"	2'-9"	-	-	-	-	-
	16'	2'-1"	2'-6"	2'-11"	3'-4"	3'-10"	-	-	-	-	-
11-7/8"	6'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
	8'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
	10'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
	12'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-2"	1'-7"
	14'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-5"	1'-10"	2'-3"	2'-8"
	16'	1'-0"	1'-0"	1'-1"	1'-4"	1'-8"	2'-1"	2'-6"	2'-11"	3'-5"	3'-9"
	18'	1'-7"	1'-10"	2'-1"	2'-5"	2'-9"	3'-2"	3'-7"	4'-0"	4'-6"	4'-11"
	20'	2'-8"	2'-11"	3'-2"	3'-6"	3'-10"	4'-3"	4'-8"	5'-2"	5'-8"	6'-1"

		NJH, NJ40H, NJ60H, NJ40U AND NJ60U SERIES PRODUCTS											
Joist Depth	Clear Span	Hole Diameter											
		2"	4"	5"	6"	7"	8.375"	9"	10"	10.5"	11"	12"	12.5"
		Minimum Distance from The Inside Edge of The Support to Center of The Hole											
9-1/2"	10'	1'-0"	1'-0"	2'-0"	3'-0"	-	-	-	-	-	-	-	-
	12'	1'-0"	1'-6"	2'-0"	2'-8"	-	-	-	-	-	-	-	-
	14'	1'-0"	3'-0"	3'-2"	3'-9"	-	-	-	-	-	-	-	-
	16'	2'-1"	4'-0"	4'-3"	4'-11"	-	-	-	-	-	-	-	-
	18'	3'-2"	5'-0"	5'-5"	6'-1"	-	-	-	-	-	-	-	-
11-7/8"	10'	1'-0"	1'-0"	1'-0"	1'-0"	1'-2"	2'-6"	-	-	-	-	-	-
	12'	1'-0"	1'-0"	1'-2"	1'-9"	2'-3"	3'-6"	-	-	-	-	-	-
	14'	1'-0"	1'-8"	2'-3"	2'-10"	3'-4"	5'-0"	-	-	-	-	-	-
	16'	1'-2"	2'-9"	3'-5"	4'-0"	4'-6"	6'-0"	-	-	-	-	-	-
	18'	2'-3"	3'-10"	4'-6"	5'-1"	5'-8"	7'-0"	-	-	-	-	-	-
14"	20'	3'-4"	4'-11"	5'-8"	6'-3"	6'-10"	8'-6"	-	-	-	-	-	-
	12'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-7"	2'-2"	3'-3"	3'-10"	-	-	-
	14'	1'-0"	1'-0"	1'-0"	1'-0"	1'-5"	2'-8"	3'-3"	4'-5"	5'-0"	-	-	-
	16'	1'-0"	1'-0"	1'-0"	1'-7"	2'-5"	3'-9"	4'-5"	5'-7"	6'-2"	-	-	-
	18'	1'-0"	1'-2"	1'-10"	2'-8"	3'-7"	4'-11"	5'-7"	6'-9"	7'-4"	-	-	-
	20'	1'-0"	2'-2"	2'-11"	3'-9"	4'-8"	6'-1"	6'-9"	7'-11"	8'-7"	-	-	-
	22'	1'-11"	3'-3"	4'-0"	4'-11"	5'-10"	7'-3"	7'-11"	9'-1"	9'-9"	-	-	-
16"	24'	3'-0"	4'-4"	5'-2"	6'-0"	6'-11"	8'-5"	9'-1"	10'-4"	11'-0"	-	-	-
	12'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-4"	1'-9"	2'-3"	2'-7"	2'-10"	3'-3"	3'-6"
	14'	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	2'-5"	2'-10"	3'-5"	3'-8"	3'-11"	4'-5"	4'-8"
	16'	1'-0"	1'-0"	1'-1"	1'-10"	2'-7"	3'-6"	3'-11"	4'-7"	4'-10"	5'-1"	5'-7"	5'-10"
	18'	1'-0"	1'-3"	2'-1"	2'-11"	3'-8"	4'-8"	5'-1"	5'-8"	6'-0"	6'-3"	6'-9"	7'-0"
	20'	1'-0"	2'-4"	3'-2"	4'-0"	4'-10"	5'-10"	6'-3"	6'-10"	7'-2"	7'-5"	8'-0"	8'-3"
	22'	1'-7"	3'-5"	4'-4"	5'-2"	5'-11"	7'-0"	7'-5"	8'-1"	8'-4"	8'-8"	9'-2"	9'-5"
	24'	2'-7"	4'-6"	5'-5"	6'-3"	7'-1"	8'-2"	8'-7"	9'-3"	9'-7"	9'-10"	10'-4"	10'-7"
16"	26'	3'-8"	5'-8"	6'-7"	7'-5"	8'-3"	9'-4"	9'-9"	10'-5"	10'-9"	11'-0"	11'-7"	11'-10"

Notes on Hole Charts:

- Contact KOTT for other load conditions, hole sizes, or for allowable rectangular hole locations.
- The maximum size hole permitted to be installed in the webs shall leave a minimum of ¼" of web material between the top and bottom of the hole and the adjacent flange.
- One 1 ½" diameter round hole can be installed anywhere in the web except directly over a support. When installing multiple holes, the spacing between the edges must be 2.5 times the diameter of the largest hole.
- Do not cut or nick flanges when cutting holes in the web.
- Whenever possible, installed holes shall be centered vertically in the web.
- For spans that are intermediate to those given in the table, select the greater distance of the two adjacent spans.

Joist series	Joist Depth (mm)	Factored Moment Resistance (N · m)	Factored Shear Resistance (N)	Bending Stiffness $EI \times 10^6$ (kN · mm ²)	Coefficient of Shear Deflection $K (x 10^6 \text{ N})$	Factored End Reaction (N)*	Factored Intermediate Reaction (N)**
NASCOR ORIGINAL I-JOISTS							
NJ	241	4980	6850	402	20.00	6850	13700
	302	6110	7560	717	25.08	7560	15120
NJH	241	5190	7030	519	20.00	7006	14060
	302	7310	8050	884	25.08	7006	16080
	356	10740	9520	1234	29.57	7006	16659
	406	12760	10630	1676	33.80	7006	17192
MSR FLANGE I-JOISTS							
NJ40H	241	6,370	8,144	556	23.10	6,670	16,499
	302	8,275	10,461	954	29.40	6,705	16,780
	356	9,960	12,567	1,405	34.70	6,740	17,061
	406	11,525	14,498	1,909	39.60	6,810	17,307
NJ60H	241	7,685	8,144	664	23.10	6,670	16,499
	302	9,985	10,461	1,135	29.40	6,705	16,780
	356	12,020	12,567	1,667	34.70	6,740	17,061
	406	13,900	14,498	2,259	39.60	6,810	17,307
NJ40U	241	9,020	8,144	771	23.60	6,670	18,255
	302	11,720	10,461	1,316	29.80	6,705	18,886
	356	14,115	12,567	1,928	35.10	6,740	19,448
	406	16,330	14,498	2,609	40.50	6,810	20,010
NJ60U	241	12,095	8,144	921	23.10	6,670	18,255
	302	15,720	10,461	1,569	29.40	6,705	18,886
	356	18,925	12,567	2,295	34.70	6,740	19,448
	406	21,895	14,498	3,099	39.60	6,810	20,010

Notes on Design Values:

- Design values were developed in accordance with CSA 086.
- *Minimum end bearing of 38 mm
- **Minimum intermediate bearing of 89mm

Get the Vertical advantage

The Nascor NJ series I-Joist is unique in the market and offers a significant advantage when it comes to value-engineering. The NJ Series features a 2x3 flange on the vertical. Its profile is the same as a 2x10 or 2x12, but its strength and stability is that of Engineered Wood. It can be used as a rim board, header or built-up beam to replace more costly Engineered Wood Products like LVL – without reducing performance.

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