

## PERFORATED PLATE

### WIDE RANGE

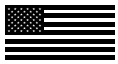
Several versions are available, designed to face all timber construction needs. The LBV plates can create simple beam and joist joints through to the most important inter-story connections.

### READY FOR USE

An "off the shelf solution" that meets the most common requirements and minimises installation times. It offers an excellent cost to performance ratio.

### EFFICIENCY

The new LBA nails achieve excellent strengths with a reduced number of fasteners.



#### USA DESIGN VALUES

CANADA, EU and more design values available online.



#### SERVICE CONDITION



#### MATERIAL



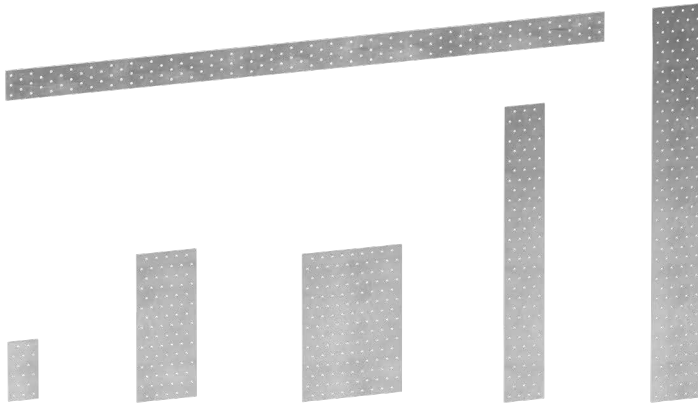
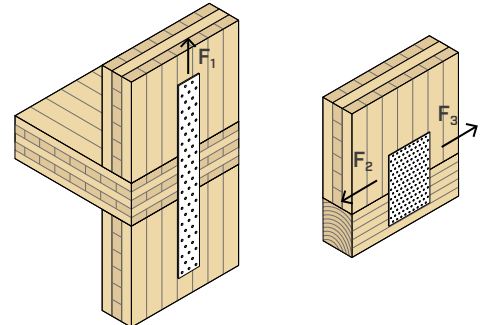
S250GD + Z275 carbon steel

#### THICKNESS [ga | in]

16 ga | 0.06 in

14 ga | 0.08 in

#### EXTERNAL LOADS



#### FIELD OF USE


Tension joints with small to medium stresses through a simple and cost-effective solution. Timber-to-timber configuration. To be used in dry condition.

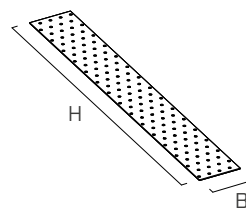
Can be applied to:

- solid timber and glulam
- timber frame
- CLT and LVL panels

## CODES AND DIMENSIONS


### LBV 16 ga [0.06 in]

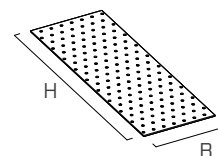
CODE	B [in]	H [in]	s [in]	n Ø0.20 [pcs]		pcs
LBV60600	2 3/8	23 5/8	0.06	75	●	10
LBV60800	2 3/8	31 1/2	0.06	100	●	10
LBV80600	3 1/8	23 5/8	0.06	105	●	10
LBV80800	3 1/8	31 1/2	0.06	140	●	10
LBV100800	4	31 1/2	0.06	180	●	10



S250  
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### LBV 14 ga [0.08 in]

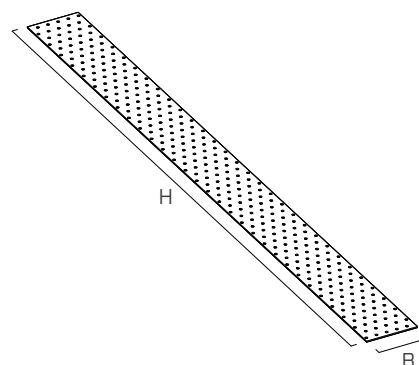
CODE	B [in]	H [in]	s [in]	n Ø0.20 [pcs]		pcs
LBV40120	1 9/16	4 3/4	0.08	9	●	200
LBV40160	1 9/16	6 1/4	0.08	12	●	50
LBV60140	2 3/8	5 1/2	0.08	18	●	50
LBV60200	2 3/8	8	0.08	25	●	100
LBV60240	2 3/8	9 1/2	0.08	30	●	100
LBV80200	3 1/8	8	0.08	35	●	50
LBV80240	3 1/8	9 1/2	0.08	42	●	50
LBV80300	3 1/8	11 3/4	0.08	53	●	50
LBV100140	4	5 1/2	0.08	32	●	50
LBV100200	4	8	0.08	45	●	50
LBV100240	4	9 1/2	0.08	54	●	50
LBV100300	4	11 3/4	0.08	68	●	50
LBV100400	4	15 3/4	0.08	90	●	20
LBV100500	4	19 3/4	0.08	112	●	20
LBV120200	4 3/4	8	0.08	55	●	50
LBV120240	4 3/4	9 1/2	0.08	66	●	50
LBV120300	4 3/4	11 3/4	0.08	83	●	50
LBV140400	5 1/2	15 3/4	0.08	130	●	15
LBV160400	6 1/4	15 3/4	0.08	150	●	15
LBV200300	8	11 3/4	0.08	142	●	15



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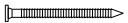

### LBV 14 ga [0.08 in] x 47 1/4 in

CODE	B [in]	H [in]	s [in]	n Ø0.20 [pcs]		pcs
LBV401200	1 9/16	47 1/4	0.08	90	●	20
LBV601200	2 3/8	47 1/4	0.08	150	●	20
LBV801200	3 1/8	47 1/4	0.08	210	●	20
LBV1001200	4	47 1/4	0.08	270	●	10
LBV1201200	4 3/4	47 1/4	0.08	330	●	10
LBV1401200	5 1/2	47 1/4	0.08	390	●	10
LBV1601200	6 1/4	47 1/4	0.08	450	●	10
LBV1801200	7 1/8	47 1/4	0.08	510	●	10
LBV2001200	8	47 1/4	0.08	570	●	5
LBV2201200	8 5/8	47 1/4	0.08	630	●	5
LBV2401200	9 1/2	47 1/4	0.08	690	●	5
LBV2601200	10 1/4	47 1/4	0.08	750	●	5
LBV2801200	11	47 1/4	0.08	810	●	5
LBV3001200	11 3/4	47 1/4	0.08	870	●	5
LBV4001200	15 3/4	47 1/4	0.08	1170	●	5

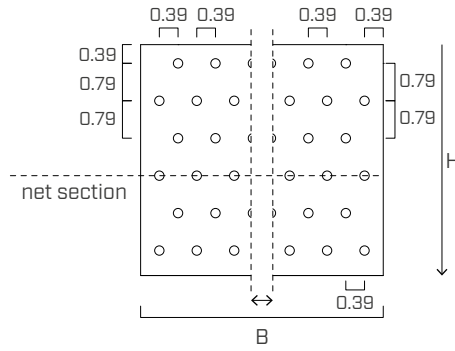


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## FASTENERS

type	description		d [in]	support 
LBA	high bond nail		0.157	

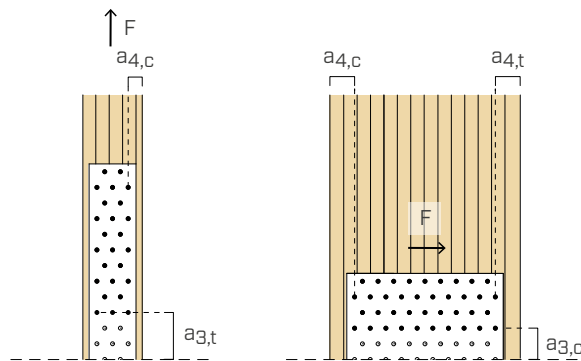
## GEOMETRY



B [in]	net area holes pcs	B [in]	net area holes [pcs]	B [in]	net area holes [pcs]
1 9/16	2	5 1/2	7	9 1/2	12
2 3/8	3	6 1/4	8	10 1/4	13
3 1/8	4	7 1/8	9	11	14
4	5	8	10	11 3/4	15
4 3/4	6	8 5/8	11	15 3/4	20

## INSTALLATION

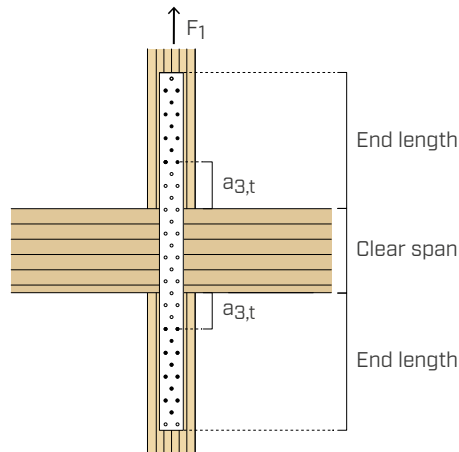
### MINIMUM DISTANCES



load-to-grain angle $\alpha = 0^\circ$		nail LBA Ø0.157
lateral connector - unloaded edge	$a_{4,c}$ [in]	$\geq 0.39$
connector - loaded end	$a_{3,t}$ [in]	$\geq 1.57$
load-to-grain angle $\alpha = 90^\circ$		nail LBA Ø4
lateral connector - loaded edge	$a_{4,t}$ [in]	$\geq 0.63$
lateral connector - unloaded edge	$a_{4,c}$ [in]	$\geq 0.24$
connector - unloaded end	$a_{3,c}$ [in]	$\geq 0.63$

Minimum distances for solid timber or glulam consistent with specific gravity  $G = < 0.5$

## STRUCTURAL VALUES | TIMBER-TO-TIMBER | F<sub>1</sub>



type	Ga.	DF/SP		SPF/HF		T <sub>ASD</sub> <sup>(2)(3)</sup> [lbf]
		fasteners pcs. - LBA Ø x L [in]	end length <sup>(1)</sup> [in]	fasteners pcs. - LBA Ø x L [in]	end length <sup>(1)</sup> [in]	
LBV60XXX	16	16 - Ø 0.157 x 2 3/8	4 1/3	20 - Ø 0.157 x 2 3/8	5 1/8	3187
LBV80XXX	16	20 - Ø 0.157 x 2 3/8	4 1/3	26 - Ø 0.157 x 2 3/8	5 1/8	4249
LBV100XXX	16	26 - Ø 0.157 x 2 3/8	4 1/3	32 - Ø 0.157 x 2 3/8	5 1/8	5311
LBV40XXX	14	14 - Ø 0.157 x 2 3/8	4 1/3	14 - Ø 0.157 x 2 3/8	6	2833
LBV60XXX	14	18 - Ø 0.157 x 2 3/8	5 1/8	18 - Ø 0.157 x 2 3/8	5 1/8	3777
LBV80XXX	14	22 - Ø 0.157 x 2 3/9	4 1/3	26 - Ø 0.157 x 2 3/9	5 1/8	5665
LBV100XXX	14	28 - Ø 0.157 x 2 3/10	4 1/3	32 - Ø 0.157 x 2 3/10	5 1/8	7082
LBV120XXX	14	34 - Ø 0.157 x 2 3/11	4 1/3	38 - Ø 0.157 x 2 3/11	5 1/8	8498
LBV140XXX	14	38 - Ø 0.157 x 2 3/12	4 1/3	44 - Ø 0.157 x 2 3/12	5 1/8	9914
LBV160XXX	14	44 - Ø 0.157 x 2 3/13	4 1/3	50 - Ø 0.157 x 2 3/13	5 1/8	11330
LBV180XXX	14	50 - Ø 0.157 x 2 3/13	4 1/3	56 - Ø 0.157 x 2 3/13	5 1/8	12747
LBV200XXX	14	54 - Ø 0.157 x 2 3/14	4 1/3	64 - Ø 0.157 x 2 3/14	5 1/8	14163
LBV220XXX	14	60 - Ø 0.157 x 2 3/15	4 1/3	68 - Ø 0.157 x 2 3/15	5 1/8	15579
LBV240XXX	14	66 - Ø 0.157 x 2 3/16	4 1/3	72 - Ø 0.157 x 2 3/16	5 1/8	16996
LBV260XXX	14	70 - Ø 0.157 x 2 3/17	4 1/3	80 - Ø 0.157 x 2 3/17	5 1/8	18412
LBV280XXX	14	76 - Ø 0.157 x 2 3/18	4 1/3	86 - Ø 0.157 x 2 3/18	5 1/8	19828
LBV300XXX	14	82 - Ø 0.157 x 2 3/19	4 1/3	94 - Ø 0.157 x 2 3/19	5 1/8	21245
LBV400XXX	14	108 - Ø 0.157 x 2 3/20	4 1/3	122 - Ø 0.157 x 2 3/20	5 1/8	28326

(1) Ensure minimum edge distance  $a_{3,t} = 1.57"$  is satisfied.

(2)  $C_d = 1.6$  has been considered in this table to account for temporarily uplift load.

(3) The tensile strength of the system T<sub>ASD</sub> is the minimum between the T<sub>ASD,steel</sub> (plate side tensile strength) and T<sub>ASD,timber</sub> (shear resistance of the connectors used for fastening).

### GENERAL PRINCIPLES

- Structural values are calculated according to NDS2024.
- Dimensioning and verification of the timber elements must be carried out separately.
- It is recommended to place the connectors symmetrically with respect to the load direction.