

55-51308 Range Road 224
 Sherwood Park, Alberta
 Canada, T8C-1H3
 Telephone: (780) 922-5590
 Fax: (780) 922-6509
 Website: ironmangroup.com
 Email: info@ironmangroup.com
 Patent: Can: 2,507,332
 US: 7,775,496



June 20, 2019

LTS P ENGINEERED - 2"x2" (50 ksi)

COLUMN	COLUMN CAPACITIES (lbs)									
	LTS P									
	HEIGHT	7'6"	8'0"	8'6"	9'0"	9'6"	10'	12'	14'	16'
WSD	10900	9775	9460	8850	7100	5700				
LSD	15330	13600	12840	11900	9200	8000				

PLATE	PLATE CAPACITIES (lbs)									
	Plate Size (in)		LVL (psi)	3.5"	5.25"	7.0"	8.75"	DM (psi)	4.5"	6.0"
OPTION OF 4X7 PLATE FOR FULL USE OF COLUMN CAPACITY	WSD	3.5 x 5.25	769	14100	14100			436	6900	
	LSD		1080	19900	19900			615	9700	
	WSD	4.5 x 6	769	16200	18200			436	11800	11800
	LSD		1080	22800	25700			615	16600	16600
	WSD	4 x 7	769	18800	16500	21000		436	6900	9200
	LSD		1080	26500	22200	30000		615	9700	14800

FOOTING	FOOTING CAPACITIES (lbs)								REINFORCING EVENLY SPACED EITHER WAY AND TIED - SEE FULL FOOTING CHART FOR MORE INSTRUCTION
Soil Bearing Capacity	FOOTING SIZE (in)	PLATE (in)	WSD	LSD	10MM	15MM	20MM		
WSD - 2000 psf LSD - 2800 psf	24 x 24 x 9	3/8	8000	11400	3	3			
	30 x 30 x 9	3/8	10000	14200	4	3	3		
	36 x 36 x 10	3/8	14000	19900	5	3	3		
	42 x 42 x 10	3/8	20000	28400	6	4	4		
WSD - 2500 psf LSD - 3500 psf	24 x 24 x 9	3/8	10000	14200	3	3	3		
	30 x 30 x 9	3/8	14000	19900	4	3	3		
	36 x 36 x 10	3/8	16000	22700	5	3	3		
	42 x 42 x 10	3/8	28000	39800	6	4	4		

NOTE CONSULT FOOTING CHART FOR FURTHER INFORMATION
 COLUMNS MUST HAVE MINIMUM EMBEDMENT OF 3" INTO CONCRETE SLAB

INSTALL

- Step 1** Measure the distance between bottom of beam and top of footing
- Step 2** Remove both plates from screw assembly by removing the nut
- Step 3** Replace nut on the rod until it reaches the pressed threads
- Step 4** Extend screw to its midpoint for future adjustment
- Step 5** Take measurement of complete column including top and base plates
- Step 6** Take measurement from step # 1 and subtract from step # 5
- Step 7** Cut off difference from bottom of column and be sure cut is true
- Step 8** Choose plate to cover full width of beam
- Step 9** Place plate on top of nut with rod inserted in the center of the hole
- Step 10** Place other plate under column and center
- Step 11** Center column on footing and beam and affix both
- Step 12** Using holes, affix top plate to beam with 1/4" lags, predrill if necessary
- Step 13** Cast into concrete floor or weld column to base plate and anchor with 2 holes-3/8"Ø A. bolts set in epoxy
- Step 14** Be sure column is in a completely vertical position to support beam



PERMIT TO PRACTICE
MR ENGINEERING LTD.

Date: June 20, 2019

PERMIT NUMBER: P11387

The Association of Professional
 Engineers And Geoscientists of Alberta

55-51308 Range Road 224
 Sherwood Park, Alberta
 Canada, T8C-1H3
 Telephone: (780) 922-5590
 Fax: (780) 922-6509
 Website: ironmangroup.com
 Email: info@ironmangroup.com
 Patent: Can: 2,507,332
 US: 7,775,496



June 20, 2019

LTS P ENGINEERED - 2"x2" (50 ksi)

COLUMN	COLUMN CAPACITIES (lbs)									
	LTS P									
	HEIGHT	7'6"	8'0"	8'6"	9'0"	9'6"	10'	12'	14'	16'
WSD	8600	7850	7200	6600	5800	4900				
LSD	12600	11500	10500	9600	8200	7000				

PLATE	PLATE CAPACITIES (lbs)									
	Plate Size (in)	LVL (psi)	3.5"	5.25"	7.0"	8.75"	DM (psi)	4.5"	6.0"	
OPTION OF 4X7 PLATE FOR FULL USE OF COLUMN CAPACITY	WSD	3.5 x 5.25	769	14100	14100			436	6900	
	LSD		1080	19900	19900			615	9700	
	WSD	4.5 x 6	769	16200	18200			436	11800	11800
	LSD		1080	22800	25700			615	16600	16600
	WSD	4 x 7	769	18800	16500	21000		436	6900	9200
	LSD		1080	26500	22200	30000		615	9700	14800

FOOTING	FOOTING CAPACITIES (lbs)								REINFORCING EVENLY SPACED EITHER WAY AND TIED - SEE FULL FOOTING CHART FOR MORE INSTRUCTION
Soil Bearing Capacity	FOOTING SIZE (in)	PLATE (in)	WSD	LSD	10MM	15MM	20MM		
WSD - 2000 psf LSD - 2800 psf	24 x 24 x 9	3/8	8000	11400	3	3			
	30 x 30 x 9	3/8	10000	14200	4	3	3		
	36 x 36 x 10	3/8	14000	19900	5	3	3		
	42 x 42 x 10	3/8	20000	28400	6	4	4		
WSD - 2500 psf LSD - 3500 psf	24 x 24 x 9	3/8	10000	14200	3	3	3		
	30 x 30 x 9	3/8	14000	19900	4	3	3		
	36 x 36 x 10	3/8	16000	22700	5	3	3		
	42 x 42 x 10	3/8	28000	39800	6	4	4		

NOTE CONSULT FOOTING CHART FOR FURTHER INFORMATION

INSTALL

- Step 1** Measure the distance between bottom of beam and top of footing
- Step 2** Remove both plates from screw assembly by removing the nut
- Step 3** Replace nut on the rod until it reaches the pressed threads
- Step 4** Extend screw to its midpoint for future adjustment
- Step 5** Take measurement of complete column including top and base plates
- Step 6** Take measurement from step # 1 and subtract from step # 5
- Step 7** Cut off difference from bottom of column and be sure cut is true
- Step 8** Choose plate to cover full width of beam
- Step 9** Place plate on top of nut with rod inserted in the center of the hole
- Step 10** Place other plate under column and center
- Step 11** Center column on footing and beam and affix both
- Step 12** Using holes, affix top plate to beam with 1/4" lags, predrill if necessary
- Step 13** Cast into concrete floor or weld column to base plate and anchor with 2 holes-3/8"Ø A. bolts set in epoxy
- Step 14** Be sure column is in a completely vertical position to support beam



PERMIT TO PRACTICE
MR ENGINEERING LTD.

Date: June 20, 2019

PERMIT NUMBER: P11387

The Association of Professional Engineers And Geoscientists of Alberta

55-51308 Range Road 224
 Sherwood Park, Alberta
 Canada, T8C-1H3
 Telephone: (780) 922-5590
 Fax: (780) 922-6509
 Website: ironmangroup.com
 Email: info@ironmangroup.com
 Patent: Can: 2,507,332
 US: 7,775,496



June 20, 2019

LTS 2P ENGINEERED - 2.5"x2.5" (50 ksi)

COLUMN	COLUMN CAPACITIES (lbs)									
	LTS 2P									
	HEIGHT	7'6"	8'0"	8'6"	9'0"	9'6"	10'	12'	14'	16'
WSD	17000	15900	14900	14000	13000	12200	9400	7350	5850	
LSD	24000	22500	21100	19800	18500	17300	13300	10400	8300	

OPTION TO INTERCHANGE ANY PLATE	PLATE CAPACITIES (lbs)									
	Plate Size (in)		LVL (psi)	3.5"	5.25"	7.0"	8.75"	DM (psi)	4.5"	6.0"
	WSD	3.5 x 7	769	18800	14100	18800		436	6900	9200
	LSD		1080	26500	19800	26500		615	9700	13000
	WSD	6 x 7	769	18800	28300	32300		436	13700	18300
LSD		1080	26500	39900	45500		615	19300	25800	

FOOTING		FOOTING CAPACITIES (lbs)							REINFORCING EVENLY SPACED EITHER WAY AND TIED - SEE FULL FOOTING CHART FOR MORE INSTRUCTION
Soil Bearing Capacity	FOOTING SIZE (in)	PLATE (in)	WSD	LSD	10MM	15MM	20MM		
WSD - 2000 psf LSD - 2800 psf	24 x 24 x 9	ANY	8000	11400	3	3			
	30 x 30 x 9	ANY	10000	14200	4	3	3		
	36 x 36 x 10	ANY	14000	19900	5	3	3		
	42 x 42 x 10	ANY	20000	28400	6	4	4		
WSD - 2500 psf LSD - 3500 psf	24 x 24 x 9	ANY	10000	14200	3	3	3		
	30 x 30 x 9	ANY	14000	19900	4	3	3		
	36 x 36 x 10	ANY	16000	22700	5	3	3		
	42 x 42 x 10	ANY	28000	39800	6	4	4		

NOTE CONSULT FOOTING CHART FOR FURTHER INFORMATION
 COLUMNS MUST HAVE MINIMUM EMBEDMENT OF 3" INTO CONCRETE SLAB

INSTALL

- Step 1** Measure the distance between bottom of beam and top of footing
- Step 2** Remove both plates from screw assembly by removing the nut
- Step 3** Replace nut on the rod until it reaches the pressed threads
- Step 4** Extend screw to its midpoint for future adjustment
- Step 5** Take measurement of complete column including top and base plates
- Step 6** Take measurement from step # 1 and subtract from step # 5
- Step 7** Cut off difference from bottom of column and be sure cut is true
- Step 8** Choose plate to cover full width of beam
- Step 9** Place plate on top of nut with rod inserted in the center of the hole
- Step 10** Place other plate under column and center
- Step 11** Center column on footing and beam and affix both
- Step 12** Using holes, affix top plate to beam with 1/4" lags, predrill if necessary
- Step 13** Cast into concrete floor or weld column to base plate and anchor with 2 holes-3/8"Ø A. bolts set in epoxy
- Step 14** Be sure column is in a completely vertical position to support beam



PERMIT TO PRACTICE
MR ENGINEERING LTD.

Date: June 20, 2019

PERMIT NUMBER: P11387

The Association of Professional
 Engineers And Geoscientists of Alberta

55-51308 Range Road 224
 Sherwood Park, Alberta
 Canada, T8C-1H3
 Telephone: (780) 922-5590
 Fax: (780) 922-6509
 Website: ironmangroup.com
 Email: info@ironmangroup.com
 Patent: Can: 2,507,332
 US: 7,775,496



June 20, 2019

LTS 2P ENGINEERED - 2.5"x2.5" (50 ksi)

COLUMN	COLUMN CAPACITIES (lbs)									
	LTS 2P									
	HEIGHT	7'6"	8'0"	8'6"	9'0"	9'6"	10'	12'	14'	16'
WSD	15100	14000	13000	12000	10400	9600	7200	5500	4300	
LSD	21300	19800	18350	17000	14650	13550	10100	7750	6100	

OPTION TO INTERCHANGE ANY PLATE	PLATE CAPACITIES (lbs)										
	Plate Size (in)	LVL (psi)	3.5"	5.25"	7.0"	8.75"	DM (psi)	4.5"	6.0"		
	WSD	3.5 x 7	769	18800	14100	18800		436	6900	9200	
	LSD		1080	26500	19800	26500		615	9700	13000	
	WSD	6 x 7	769	18800	28300	32300		436	13700	18300	
LSD		1080	26500	39900	45500		615	19300	25800		

FOOTING		FOOTING CAPACITIES (lbs)							REINFORCING EVENLY SPACED EITHER WAY AND TIED - SEE FULL FOOTING CHART FOR MORE INSTRUCTION
Soil Bearing Capacity	FOOTING SIZE (in)	PLATE (in)	WSD	LSD	10MM	15MM	20MM		
WSD - 2000 psf LSD - 2800 psf	24 x 24 x 9	ANY	8000	11400	3	3			
	30 x 30 x 9	ANY	10000	14200	4	3	3		
	36 x 36 x 10	ANY	14000	19900	5	3	3		
	42 x 42 x 10	ANY	20000	28400	6	4	4		
WSD - 2500 psf LSD - 3500 psf	24 x 24 x 9	ANY	10000	14200	3	3	3		
	30 x 30 x 9	ANY	14000	19900	4	3	3		
	36 x 36 x 10	ANY	16000	22700	5	3	3		
	42 x 42 x 10	ANY	28000	39800	6	4	4		

NOTE CONSULT FOOTING CHART FOR FURTHER INFORMATION

INSTALL

- Step 1** Measure the distance between bottom of beam and top of footing
- Step 2** Remove both plates from screw assembly by removing the nut
- Step 3** Replace nut on the rod until it reaches the pressed threads
- Step 4** Extend screw to its midpoint for future adjustment
- Step 5** Take measurement of complete column including top and base plates
- Step 6** Take measurement from step # 1 and subtract from step # 5
- Step 7** Cut off difference from bottom of column and be sure cut is true
- Step 8** Choose plate to cover full width of beam
- Step 9** Place plate on top of nut with rod inserted in the center of the hole
- Step 10** Place other plate under column and center
- Step 11** Center column on footing and beam and affix both
- Step 12** Using holes, affix top plate to beam with 1/4" lags, predrill if necessary
- Step 13** Cast into concrete floor or weld column to base plate and anchor with 2 holes-3/8"Ø A. bolts set in epoxy
- Step 14** Be sure column is in a completely vertical position to support beam



PERMIT TO PRACTICE
MR ENGINEERING LTD.

Date: June 20, 2019

PERMIT NUMBER: P11387

The Association of Professional
 Engineers And Geoscientists of Alberta

55-51308 Range Road 224
 Sherwood Park, Alberta
 Canada, T8C-1H3
 Telephone: (780) 922-5590
 Fax: (780) 922-6509
 Website: ironmangroup.com
 Email: info@ironmangroup.com
 Patent: Can: 2,507,332
 US: 7,775,496



June 20, 2019

LTS 3P & 4P ENGINEERED - 2.5"x2.5" (50 ksi)

COLUMN	COLUMN CAPACITIES (lbs)									
	HEIGHT	LTS 3				LTS 4				
		7'6"	8'0"	8'6"	9'0"	9'6"	10'	12'	14'	16'
		WSD	20800	19500	18300	17100	16000	14600	11500	9000
LSD	29500	27650	25900	24200	22600	21200	16300	12700	10100	

OPTION TO INTERCHANGE ANY PLATE	PLATE CAPACITIES (lbs)									
	Plate Size (in)	LVL (psi)	3.5"	5.25"	7.0"	8.75"	SPF (psi)	4.5"	6.0"	
	WSD	3.5 x 7	769	18800	14100	18800		436	6900	9200
	LSD		1080	26500	19800	26500		615	9700	13000
	WSD	6 x 7	769	18800	28300	32300		436	13700	18300
LSD		1080	26500	39900	45500		615	19300	25800	

FOOTING		FOOTING CAPACITIES (lbs)							REINFORCING EVENLY SPACED EITHER WAY AND TIED - SEE FULL FOOTING CHART FOR MORE INSTRUCTION
Soil Bearing Capacity	FOOTING SIZE (in)	PLATE (in)	WSD	LSD	10MM	15MM	20MM		
WSD - 2000 psf LSD - 2800 psf	24 x 24 x 9	ANY	8000	11400	3	3			
	30 x 30 x 9	ANY	10000	14200	4	3	3		
	36 x 36 x 10	ANY	14000	19900	5	3	3		
	42 x 42 x 10	ANY	20000	28400	6	4	4		
WSD - 2500 psf LSD - 3500 psf	24 x 24 x 9	ANY	10000	14200	3	3	3		
	30 x 30 x 9	ANY	14000	19900	4	3	3		
	36 x 36 x 10	ANY	16000	22700	5	3	3		
	42 x 42 x 10	ANY	28000	39800	6	4	4		

NOTE

CONSULT FOOTING CHART FOR FURTHER INFORMATION
 COLUMNS MUST HAVE MINIMUM EMBEDMENT OF 3" INTO CONCRETE SLAB

INSTALL

- Step 1** Measure the distance between bottom of beam and top of footing
- Step 2** Remove both plates from screw assembly by removing the nut
- Step 3** Replace nut on the rod until it reaches the pressed threads
- Step 4** Extend screw to its midpoint for future adjustment
- Step 5** Take measurement of complete column including top and base plates
- Step 6** Take measurement from step # 1 and subtract from step # 5
- Step 7** Cut off difference from bottom of column and be sure cut is true
- Step 8** Choose plate to cover full width of beam
- Step 9** Place plate on top of nut with rod inserted in the center of the hole
- Step 10** Place other plate under column and center
- Step 11** Center column on footing and beam and affix both
- Step 12** Using holes, affix top plate to beam with 1/4" lags, predrill if necessary
- Step 13** Cast into concrete floor or weld column to base plate and anchor with 2 holes-3/8"Ø A. bolts set in epoxy
- Step 14** Be sure column is in a completely vertical position to support beam



**PERMIT TO PRACTICE
 MR ENGINEERING LTD.**

Date: June 20, 2019

PERMIT NUMBER: P11387

The Association of Professional Engineers And Geoscientists of Alberta

55-51308 Range Road 224
 Sherwood Park, Alberta
 Canada, T8C-1H3
 Telephone: (780) 922-5590
 Fax: (780) 922-6509
 Website: ironmangroup.com
 Email: info@ironmangroup.com
 Patent: Can: 2,507,332
 US: 7,775,496



June 20, 2019

LTS 3P & 4P ENGINEERED - 2.5"x2.5" (50 ksi)

COLUMN	COLUMN CAPACITIES (lbs)									
	HEIGHT	LTS 3			LTS 4					
		7'6"	8'0"	8'6"	9'0"	9'6"	10'	12'	14'	16'
WSD	18500	17100	15900	14700	12700	11700	8700	6700	5200	
LSD	26100	24200	22500	20800	17900	16600	12400	9500	7400	

OPTION TO INTERCHANGE ANY PLATE	PLATE CAPACITIES (lbs)									
	Plate Size (in)	LVL (psi)	3.5"	5.25"	7.0"	8.75"	SPF (psi)	4.5"	6.0"	
	WSD	3.5 x 7	769	18800	14100	18800		436	6900	9200
	LSD		1080	26500	19800	26500		615	9700	13000
	WSD	6 x 7	769	18800	28300	32300		436	13700	18300
LSD		1080	26500	39900	45500		615	19300	25800	

FOOTING	FOOTING CAPACITIES (lbs)							REINFORCING EVENLY SPACED EITHER WAY AND TIED - SEE FULL FOOTING CHART FOR MORE INSTRUCTION
Soil Bearing Capacity	FOOTING SIZE (in)	PLATE (in)	WSD	LSD	10MM	15MM	20MM	
WSD – 2000 psf LSD – 2800 psf	24 x 24 x 9	ANY	8000	11400	3	3		
	30 x 30 x 9	ANY	10000	14200	4	3	3	
	36 x 36 x 10	ANY	14000	19900	5	3	3	
	42 x 42 x 10	ANY	20000	28400	6	4	4	
	48 x 48 x 10	ANY	30000	42000	6	4	4	
WSD – 2500 psf LSD – 3500 psf	24 x 24 x 9	ANY	10000	14200	3	3	3	
	30 x 30 x 9	ANY	14000	19900	4	3	3	
	36 x 36 x 10	ANY	16000	22700	5	3	3	
	42 x 42 x 10	ANY	28000	39800	6	4	4	
	48 x 48 x 10	ANY	38000	52000	6	4	4	

NOTE CONSULT FOOTING CHART FOR FURTHER INFORMATION

INSTALL

- Step 1** Measure the distance between bottom of beam and top of footing
- Step 2** Remove both plates from screw assembly by removing the nut
- Step 3** Replace nut on the rod until it reaches the pressed threads
- Step 4** Extend screw to its midpoint for future adjustment
- Step 5** Take measurement of complete column including top and base plates
- Step 6** Take measurement from step # 1 and subtract from step # 5
- Step 7** Cut off difference from bottom of column and be sure cut is true
- Step 8** Choose plate to cover full width of beam
- Step 9** Place plate on top of nut with rod inserted in the center of the hole
- Step 10** Place other plate under column and center
- Step 11** Center column on footing and beam and affix both
- Step 12** Using holes, affix top plate to beam with 1/4" lags, predrill if necessary
- Step 13** Cast into concrete floor or weld column to base plate and anchor with 2 holes-3/8"Ø A. bolts set in epoxy
- Step 14** Be sure column is in a completely vertical position to support beam



PERMIT TO PRACTICE
MR ENGINEERING LTD.

Date: June 20, 2019

PERMIT NUMBER: P11387

The Association of Professional
 Engineers And Geoscientists of Alberta

55-51308 Range Road 224
 Sherwood Park, Alberta
 Canada, T8C-1H3
 Telephone: (780) 922-5590
 Fax: (780) 922-6509
 Website: ironmangroup.com
 Email: info@ironmangroup.com
 Patent: Can: 2,507,332
 US: 7,775,496



June 20, 2019

LTS 5P & 6P ENGINEERED – 3"x3" (50 ksi)

COLUMN	COLUMN CAPACITIES (lbs)									
	HEIGHT	LTS 5			LTS 6					
		7'6"	8'0"	8'6"	9'0"	9'6"	10'	12'	14'	16'
WSD	29600	28100	26700	25400	24000	22800	18200	14600	11900	
LSD	41900	39900	37900	36000	34100	32600	25800	20800	16900	

OPTION TO INTERCHANGE ANY PLATE	PLATE CAPACITIES (lbs)									
	Plate Size (in)	LVL (psi)	3.5"	5.25"	7.0"	8.75"	SPF (psi)	4.5"	6.0"	
	WSD	3.5 x 7	769	18800	14100	18800		436	6900	9200
	LSD		1080	26500	19800	26500		615	9700	13000
	WSD	6 x 7	769	18800	28300	32300		436	13700	18300
LSD		1080	26500	39900	45500		615	19300	25800	

FOOTING		FOOTING CAPACITIES (lbs)							REINFORCING EVENLY SPACED EITHER WAY AND TIED – SEE FULL FOOTING CHART FOR MORE INSTRUCTION
Soil Bearing Capacity	FOOTING SIZE (in)	PLATE (in)	WSD	LSD	10MM	15MM	20MM		
WSD – 2000 psf LSD – 2800 psf	24 x 24 x 9	1/2	8000	11400	3	3			
	30 x 30 x 9	1/2	10000	14200	4	3	3		
	36 x 36 x 10	1/2	14000	19900	5	3	3		
	42 x 42 x 10	1/2	20000	28400	6	4	4		
	48 x 48 x 10	1/2	30000	42000	6	4	4		
WSD – 2500 psf LSD – 3500 psf	24 x 24 x 9	1/2	10000	14200	3	3	3		
	30 x 30 x 9	1/2	14000	19900	4	3	3		
	36 x 36 x 10	1/2	16000	22700	5	3	3		
	42 x 42 x 10	1/2	28000	39800	6	4	4		
	48 x 48 x 10	1/2	38000	52000	6	4	4		

NOTE CONSULT FOOTING CHART FOR FURTHER INFORMATION
 COLUMNS MUST HAVE MINIMUM EMBEDMENT OF 3" INTO CONCRETE SLAB

INSTALL

- Step 1** Measure the distance between bottom of beam and top of footing
- Step 2** Remove both plates from screw assembly by removing the nut
- Step 3** Replace nut on the rod until it reaches the pressed threads
- Step 4** Extend screw to its midpoint for future adjustment
- Step 5** Take measurement of complete column including top and base plates
- Step 6** Take measurement from step # 1 and subtract from step # 5
- Step 7** Cut off difference from bottom of column and be sure cut is true
- Step 8** Choose plate to cover full width of beam
- Step 9** Place plate on top of nut with rod inserted in the center of the hole
- Step 10** Place other plate under column and center
- Step 11** Center column on footing and beam and affix both
- Step 12** Using holes, affix top plate to beam with 1/4" lags, predrill if necessary
- Step 13** Cast into concrete floor or weld column to base plate and anchor with 2 holes-3/8"Ø A. bolts set in epoxy
- Step 14** Be sure column is in a completely vertical position to support beam



**PERMIT TO PRACTICE
 MR ENGINEERING LTD.**

Date: June 20, 2019

PERMIT NUMBER: P11387

The Association of Professional
 Engineers And Geoscientists of Alberta

55-51308 Range Road 224
 Sherwood Park, Alberta
 Canada, T8C-1H3
 Telephone: (780) 922-5590
 Fax: (780) 922-6509
 Website: ironmangroup.com
 Email: info@ironmangroup.com
 Patent: Can: 2,507,332
 US: 7,775,496



June 20, 2019

LTS 5P & 6P ENGINEERED - 3"x3" (50 ksi)

COLUMN	COLUMN CAPACITIES (lbs)									
	HEIGHT	LTS 5			LTS 6					
		7'6"	8'0"	8'6"	9'0"	9'6"	10'	12'	14'	16'
WSD	27000	25500	24000	22500	19800	18600	14300	11200	8900	
LSD	38200	36000	33900	32000	30100	28600	20300	15900	12600	

OPTION TO INTERCHANGE ANY PLATE	PLATE CAPACITIES (lbs)									
	Plate Size (in)	LVL (psi)	3.5"	5.25"	7.0"	8.75"	SPF (psi)	4.5"	6.0"	
	WSD	3.5 x 7	769	18800	14100	18800		436	6900	9200
	LSD		1080	26500	19800	26500		615	9700	13000
	WSD	6 x 7	769	18800	28300	32300		436	13700	18300
LSD		1080	26500	39900	45500		615	19300	25800	

FOOTING	FOOTING CAPACITIES (lbs)							REINFORCING EVENLY SPACED EITHER WAY AND TIED - SEE FULL FOOTING CHART FOR MORE INSTRUCTION
	Soil Bearing Capacity	FOOTING SIZE (in)	PLATE (in)	WSD	LSD	10MM	15MM	
WSD - 2000 psf LSD - 2800 psf	24 x 24 x 9	1/2	8000	11400	3	3		
	30 x 30 x 9	1/2	10000	14200	4	3	3	
	36 x 36 x 10	1/2	14000	19900	5	3	3	
	42 x 42 x 10	1/2	20000	28400	6	4	4	
	48 x 48 x 10	1/2	30000	42000	6	4	4	
WSD - 2500 psf LSD - 3500 psf	24 x 24 x 9	1/2	10000	14200	3	3	3	
	30 x 30 x 9	1/2	14000	19900	4	3	3	
	36 x 36 x 10	1/2	16000	22700	5	3	3	
	42 x 42 x 10	1/2	28000	39800	6	4	4	
	48 x 48 x 10	1/2	38000	52000	6	4	4	

NOTE CONSULT FOOTING CHART FOR FURTHER INFORMATION

INSTALL

- Step 1** Measure the distance between bottom of beam and top of footing
- Step 2** Remove both plates from screw assembly by removing the nut
- Step 3** Replace nut on the rod until it reaches the pressed threads
- Step 4** Extend screw to its midpoint for future adjustment
- Step 5** Take measurement of complete column including top and base plates
- Step 6** Take measurement from step # 1 and subtract from step # 5
- Step 7** Cut off difference from bottom of column and be sure cut is true
- Step 8** Choose plate to cover full width of beam
- Step 9** Place plate on top of nut with rod inserted in the center of the hole
- Step 10** Place other plate under column and center
- Step 11** Center column on footing and beam and affix both
- Step 12** Using holes, affix top plate to beam with 1/4" lags, predrill if necessary
- Step 13** Cast into concrete floor or weld column to base plate and anchor with 2 holes-3/8"Ø A. bolts set in epoxy
- Step 14** Be sure column is in a completely vertical position to support beam



PERMIT TO PRACTICE
MR ENGINEERING LTD.

Date: June 20, 2019

PERMIT NUMBER: P11387

The Association of Professional
 Engineers And Geoscientists of Alberta

55-51308 Range Road 224
 Sherwood Park, Alberta
 Canada, T8C-1H3
 Telephone: (780) 922-5590
 Fax: (780) 922-6509
 Website: ironmangroup.com
 Email: info@ironmangroup.com
 Patent: Can: 2,507,332
 US: 7,775,496



June 20, 2019

LTS 7 & 8 ENGINEERED - 3"x3" (50 ksi)

COLUMN	COLUMN CAPACITIES (lbs)									
	LTS 7					LTS 8				
	HEIGHT	7'6"	8'0"	8'6"	9'0"	9'6"	10'	12'	14'	16'
WSD	37600	35900	34500	31700	29800	27600	21200	15400	9600	
LSD	53950	51700	48900	46100	44300	41600	30200	22800	15100	

OPTION TO INTERCHANGE ANY PLATE	PLATE CAPACITIES (lbs)										
	Plate Size (in)	LVL (psi)	3.5"	5.25"	7.0"	8.75"	SPF (psi)	4.5"	6.0"		
	WSD	3.5 x 9	769	24200	14100	18800	23600	436	6900	9200	
	LSD		1080	34100	19900	26500	33300	615	9700	13000	
	WSD	6 x 9	769	24200	36400	32300	40400	436	17700	23500	
	LSD		1080	34100	51300	45500	57000	615	25000	33100	
	WSD	8 x 9	769	24400	36400	48500	53900	436	17700	23500	
LSD		1080	34400	51600	68800	76400	615	25000	33100		

FOOTING		FOOTING CAPACITIES (lbs)							REINFORCING EVENLY SPACED EITHER WAY AND TIED - SEE FULL FOOTING CHART FOR MORE INSTRUCTION
Soil Bearing Capacity	FOOTING SIZE (in)	PLATE (in)	WSD	LSD	10MM	15MM	20MM		
WSD – 2000 psf LSD – 2800 psf	42 x 42 x 10	ANY	20000	28400	6	4	4		
	48 x 48 x 10	ANY	30000	42000	6	4	4		
	42 x 42 x 10	8" x 8"	22500	32500	6	4	4		
	48 x 48 x 10	8" x 8"	30500	42500	6	4	4		
WSD – 2500 psf LSD – 3500 psf	42 x 42 x 10	ANY	28000	39800	6	4	4		
	48 x 48 x 10	ANY	38000	52000	6	4	4		
	42 x 42 x 10	8" x 8"	29000	41000	6	4	4		
	48 x 48 x 10	8" x 8"	38500	54000	6	4	4		

NOTE CONSULT FOOTING CHART FOR FURTHER INFORMATION
 COLUMNS MUST HAVE MINIMUM EMBEDMENT OF 3" INTO CONCRETE SLAB

INSTALL

- Step 1** Measure the distance between bottom of beam and top of footing
- Step 2** Remove both plates from screw assembly by removing the nut
- Step 3** Replace nut on the rod until it reaches the pressed threads
- Step 4** Extend screw to its midpoint for future adjustment
- Step 5** Take measurement of complete column including top and base plates
- Step 6** Take measurement from step # 1 and subtract from step # 5
- Step 7** Cut off difference from bottom of column and be sure cut is true
- Step 8** Choose plate to cover full width of beam
- Step 9** Place plate on top of nut with rod inserted in the center of the hole
- Step 10** Place other plate under column and center
- Step 11** Center column on footing and beam and affix both
- Step 12** Using holes, affix top plate to beam with 1/4" lags, predrill if necessary
- Step 13** Cast into concrete floor or weld column to base plate and anchor with 2 holes-3/8"Ø A. bolts set in epoxy
- Step 14** Be sure column is in a completely vertical position to support beam



**PERMIT TO PRACTICE
 MR ENGINEERING LTD.**

Date: June 20, 2019

PERMIT NUMBER: P11387

The Association of Professional
 Engineers And Geoscientists of Alberta

55-51308 Range Road 224
 Sherwood Park, Alberta
 Canada, T8C-1H3
 Telephone: (780) 922-5590
 Fax: (780) 922-6509
 Website: ironmangroup.com
 Email: info@ironmangroup.com
 Patent: Can: 2,507,332
 US: 7,775,496



June 20, 2019

LTS 7 & 8 ENGINEERED - 3"x3" (50 ksi)

COLUMN	COLUMN CAPACITIES (lbs)									
	LTS 7					LTS 8				
	HEIGHT	7'6"	8'0"	8'6"	9'0"	9'6"	10'	12'	14'	16'
WSD	35200	33300	31800	29700	27800	25600	19200	13400	7900	
LSD	50950	48700	45900	43100	41300	37600	27200	19800	12100	

PLATE	PLATE CAPACITIES (lbs)									
	Plate Size (in)	LVL (psi)	3.5"	5.25"	7.0"	8.75"	SPF (psi)	4.5"	6.0"	
OPTION TO INTERCHANGE ANY PLATE	WSD	3.5 x 9	769	24200	14100	18800	23600	436	6900	9200
	LSD		1080	34100	19900	26500	33300	615	9700	13000
	WSD	6 x 9	769	24200	36400	32300	40400	436	17700	23500
	LSD		1080	34100	51300	45500	57000	615	25000	33100
	WSD	8 x 9	769	24400	36400	48500	53900	436	17700	23500
	LSD		1080	34400	51600	68800	76400	615	25000	33100

FOOTING	FOOTING CAPACITIES (lbs)							
	SOIL BEARING CAPACITY	FOOTING SIZE (in)	PLATE (in)	WSD	LSD	10MM	15MM	20MM
WSD – 2000 psf LSD – 2800 psf		42 x 42 x 10	ANY	20000	28400	6	4	4
		48 x 48 x 10	ANY	30000	42000	6	4	4
		42 x 42 x 10	8" x 8"	22500	32500	6	4	4
		48 x 48 x 10	8" x 8"	30500	42500	6	4	4
WSD – 2500 psf LSD – 3500 psf		42 x 42 x 10	ANY	28000	39800	6	4	4
		48 x 48 x 10	ANY	38000	52000	6	4	4
		42 x 42 x 10	8" x 8"	29000	41000	6	4	4
		48 x 48 x 10	8" x 8"	38500	54000	6	4	4

REINFORCING EVENLY SPACED EITHER WAY AND TIED - SEE FULL FOOTING CHART FOR MORE INSTRUCTION

NOTE CONSULT FOOTING CHART FOR FURTHER INFORMATION

INSTALL

- Step 1** Measure the distance between bottom of beam and top of footing
- Step 2** Remove both plates from screw assembly by removing the nut
- Step 3** Replace nut on the rod until it reaches the pressed threads
- Step 4** Extend screw to its midpoint for future adjustment
- Step 5** Take measurement of complete column including top and base plates
- Step 6** Take measurement from step # 1 and subtract from step # 5
- Step 7** Cut off difference from bottom of column and be sure cut is true
- Step 8** Choose plate to cover full width of beam
- Step 9** Place plate on top of nut with rod inserted in the center of the hole
- Step 10** Place other plate under column and center
- Step 11** Center column on footing and beam and affix both
- Step 12** Using holes, affix top plate to beam with 1/4" lags, predrill if necessary
- Step 13** Cast into concrete floor or weld column to base plate and anchor with 2 holes-3/8"Ø A. bolts set in epoxy
- Step 14** Be sure column is in a completely vertical position to support beam



**PERMIT TO PRACTICE
 MR ENGINEERING LTD.**

Date: June 20, 2019

PERMIT NUMBER: P11387

The Association of Professional Engineers And Geoscientists of Alberta

55-51308 Range Road 224
 Sherwood Park, Alberta
 Canada, T8C-1H3
 Telephone: (780) 922-5590
 Fax: (780) 922-6509
 Website: ironmangroup.com
 Email: info@ironmangroup.com
 Patent: Can: 2,507,332
 US: 7,775,496



June 20, 2019

LTS 9 & 10 ENGINEERED – 3.5"x3.5" (50 ksi)

COLUMN	COLUMN CAPACITIES (lbs)									
	HEIGHT	LTS 9			LTS 10					
		7'6"	8'0"	8'6"	9'0"	9'6"	10'	12'	14'	16'
WSD	48600	47000	45500	42800	41200	39800	34100	26400	20300	
LSD	83200	77800	72900	68900	63400	58900	47100	36100	28800	

OPTION TO INTERCHANGE ANY PLATE	PLATE CAPACITIES (lbs)									
	Plate Size (in)	LVL (psi)	3.5"	5.25"	7.0"	8.75"	SPF (psi)	4.5"	6.0"	
	WSD	3.5 x 10	769	26900	14100	18800	23600	436	6900	9200
	LSD		1080	37900	1990	26500	33300	615	9700	13000
	WSD	6 x 10	769	26900	40400	32300	40400	436	19600	26200
	LSD		1080	37900	57000	45500	57000	615	27600	36900
	WSD	8 x 10	769	20900	40400	53900	53900	436	19600	26200
LSD		1080	29500	57000	76000	76000	615	27600	36900	

FOOTING	FOOTING CAPACITIES (lbs)								REINFORCING EVENLY SPACED EITHER WAY AND TIED – SEE FULL FOOTING CHART FOR MORE INSTRUCTION
Soil Bearing Capacity	FOOTING SIZE (in)	PLATE (in)	WSD	LSD	10MM	15MM	20MM		
WSD – 2000 psf LSD – 2800 psf	42 x 42 x 10	8" x 8"	22500	32500	6	4	4		
	48 x 48 x 10	8" x 8"	30500	42500	6	4	4		
	54 x 54 x 12	8" x 8"	36000	51100	7	5	5		
	60 x 60 x 12	8" x 8"	46200	66200	9	5	5		
	66 x 66 x 12	8" x 8"	56000	79500	12	6	5		
WSD – 2500 psf LSD – 3500 psf	42 x 42 x 10	8" x 8"	29000	41000	6	4	4		
	48 x 48 x 10	8" x 8"	38500	54000	6	4	4		
	54 x 54 x 12	8" x 8"	48000	68200	8	5	5		
	60 x 60 x 12	8" x 8"	58000	82500	10	5	5		
	66 x 66 x 12	8" x 8"	65000	90500	12	6	5		

NOTE CONSULT FOOTING CHART FOR FURTHER INFORMATION
 COLUMNS MUST HAVE MINIMUM EMBEDMENT OF 3" INTO CONCRETE SLAB

INSTALL

- Step 1 Measure the distance between bottom of beam and top of footing
- Step 2 Remove both plates from screw assembly by removing the nut
- Step 3 Replace nut on the rod until it reaches the pressed threads
- Step 4 Extend screw to its midpoint for future adjustment
- Step 5 Take measurement of complete column including top and base plates
- Step 6 Take measurement from step # 1 and subtract from step # 5
- Step 7 Cut off difference from bottom of column and be sure cut is true
- Step 8 Choose plate to cover full width of beam
- Step 9 Place plate on top of nut with rod inserted in the center of the hole
- Step 10 Place other plate under column and center
- Step 11 Center column on footing and beam and affix both
- Step 12 Using holes, affix top plate to beam with 1/4" lags, predrill if necessary
- Step 13 Cast into concrete floor or weld column to base plate and anchor with 2 holes-3/8"Ø A. bolts set in epoxy
- Step 14 Be sure column is in a completely vertical position to support beam



PERMIT TO PRACTICE
MR ENGINEERING LTD.

Date: June 20, 2019

PERMIT NUMBER: P11387

The Association of Professional Engineers And Geoscientists of Alberta

55-51308 Range Road 224
 Sherwood Park, Alberta
 Canada, T8C-1H3
 Telephone: (780) 922-5590
 Fax: (780) 922-6509
 Website: ironmangroup.com
 Email: info@ironmangroup.com
 Patent: Can: 2,507,332
 US: 7,775,496



June 20, 2019

LTS 9 & 10 ENGINEERED – 3.5"x3.5" (50 ksi)

COLUMN	COLUMN CAPACITIES (lbs)									
	LTS 9				LTS 10					
	HEIGHT	7'6"	8'0"	8'6"	9'0"	9'6"	10'	12'	14'	16'
WSD	46200	45100	43300	40600	39500	37900	32300	24200	18700	
LSD	81400	75600	70500	65700	61300	56600	45400	33300	25500	

PLATE	PLATE CAPACITIES (lbs)									
	Plate Size (in)	LVL (psi)	3.5"	5.25"	7.0"	8.75"	SPF (psi)	4.5"	6.0"	
OPTION TO INTERCHANGE ANY PLATE	WSD	3.5 x 10	769	26900	14100	18800	23600	436	6900	9200
	LSD		1080	37900	1990	26500	33300	615	9700	13000
	WSD	6 x 10	769	26900	40400	32300	40400	436	19600	26200
	LSD		1080	37900	57000	45500	57000	615	27600	36900
	WSD	8 x 10	769	20900	40400	53900	53900	436	19600	26200
	LSD		1080	29500	57000	76000	76000	615	27600	36900

FOOTING	FOOTING CAPACITIES (lbs)								REINFORCING EVENLY SPACED EITHER WAY AND TIED – SEE FULL FOOTING CHART FOR MORE INSTRUCTION
Soil Bearing Capacity	FOOTING SIZE (in)	PLATE (in)	WSD	LSD	10MM	15MM	20MM		
WSD – 2000 psf LSD – 2800 psf	42 x 42 x 10	8" x 8"	22500	32500	6	4	4		
	48 x 48 x 10	8" x 8"	30500	42500	6	4	4		
	54 x 54 x 12	8" x 8"	36000	51100	7	5	5		
	60 x 60 x 12	8" x 8"	46200	66200	9	5	5		
	66 x 66 x 12	8" x 8"	56000	79500	12	6	5		
WSD – 2500 psf LSD – 3500 psf	42 x 42 x 10	8" x 8"	29000	41000	6	4	4		
	48 x 48 x 10	8" x 8"	38500	54000	6	4	4		
	54 x 54 x 12	8" x 8"	48000	68200	8	5	5		
	60 x 60 x 12	8" x 8"	58000	82500	10	5	5		
	66 x 66 x 12	8" x 8"	65000	90500	12	6	5		

NOTE CONSULT FOOTING CHART FOR FURTHER INFORMATION

INSTALL

- Step 1** Measure the distance between bottom of beam and top of footing
- Step 2** Remove both plates from screw assembly by removing the nut
- Step 3** Replace nut on the rod until it reaches the pressed threads
- Step 4** Extend screw to its midpoint for future adjustment
- Step 5** Take measurement of complete column including top and base plates
- Step 6** Take measurement from step # 1 and subtract from step # 5
- Step 7** Cut off difference from bottom of column and be sure cut is true
- Step 8** Choose plate to cover full width of beam
- Step 9** Place plate on top of nut with rod inserted in the center of the hole
- Step 10** Place other plate under column and center
- Step 11** Center column on footing and beam and affix both
- Step 12** Using holes, affix top plate to beam with 1/4" lags, predrill if necessary
- Step 13** Cast into concrete floor or weld column to base plate and anchor with 2 holes-3/8"Ø A. bolts set in epoxy
- Step 14** Be sure column is in a completely vertical position to support beam



PERMIT TO PRACTICE
MR ENGINEERING LTD.

Date: June 20, 2019

PERMIT NUMBER: P11387

The Association of Professional
 Engineers And Geoscientists of Alberta

55-51308 Range Road 224
 Sherwood Park, Alberta
 Canada, T8C-1H3
 Telephone: (780) 922-5590
 Fax: (780) 922-6509
 Website: ironmangroup.com
 Email: info@ironmangroup.com
 Patent: Can: 2,507,332
 US: 7,775,496



June 20, 2019

LTS 11 & 12 ENGINEERED - 4"x4" (50 ksi)

COLUMN	COLUMN CAPACITIES (lbs)										
	HEIGHT	LTS 11				LTS 12					
		7'6"	8'0"	8'6"	9'0"	9'6"	10'	12'	14'	16'	
WSD	66800	64200	62200	59600	56900	52000	44100	37200	31300		
LSD	94800	91500	88800	84300	81200	74800	60900	49200	41000		

PLATE	PLATE CAPACITIES (lbs)									
	Plate Size (in)	LVL (psi)	3.5"	5.25"	7.0"	8.75"	SPF (psi)	4.5"	6.0"	
OPTION TO INTERCHANGE ANY PLATE	WSD	4 x 13	769	35000	14100	18800	23600	436	6900	9200
	LSD		1080	49400	19900	26500	33300	615	9700	13000
	WSD	6 x 13	769	35000	52500	32300	40400	436	25500	34000
	LSD		1080	49400	74000	45500	57000	615	36000	47900
	WSD	8 x 13	769	35000	52500	70000	53900	436	25500	34000
	LSD		1080	49400	74000	98700	76000	615	36000	47900

FOOTING	FOOTING CAPACITIES (lbs)								REINFORCING EVENLY SPACED EITHER WAY AND TIED - SEE FULL FOOTING CHART FOR MORE INSTRUCTION
Soil Bearing Capacity	FOOTING SIZE (in)	PLATE (in)	WSD	LSD	10MM	15MM	20MM		
WSD - 2000 psf LSD - 2800 psf	54 x 54 x 12	8" x 8"	36000	51100	7	5	5		
	60 x 60 x 12	8" x 8"	46200	66200	9	5	5		
	66 x 66 x 12	8" x 8"	56000	79500	12	6	5		
	72 x 72 x 14	8" x 8"	65500	94000	16	9	6		
	78 x 78 x 14	8" x 8"	76500	109600		11	7		
	84 x 84 x 14	8" x 8"	88000	125000		12	8		
WSD - 2500 psf LSD - 3500 psf	54 x 54 x 12	8" x 8"	48000	68200	8	5	5		
	60 x 60 x 12	8" x 8"	58000	82500	10	5	5		
	66 x 66 x 12	8" x 8"	65000	90500	12	6	5		
	72 x 72 x 14	8" x 8"	82500	118000		9	6		
	78 x 78 x 14	8" x 8"	94000	130500		11	7		

NOTE CONSULT FOOTING CHART FOR FURTHER INFORMATION
 COLUMNS MUST HAVE MINIMUM EMBEDMENT OF 3" INTO CONCRETE SLAB

INSTALL

- Step 1** Measure the distance between bottom of beam and top of footing
- Step 2** Remove both plates from screw assembly by removing the nut
- Step 3** Replace nut on the rod until it reaches the pressed threads
- Step 4** Extend screw to its midpoint for future adjustment
- Step 5** Take measurement of complete column including top and base plates
- Step 6** Take measurement from step # 1 and subtract from step # 5
- Step 7** Cut off difference from bottom of column and be sure cut is true
- Step 8** Choose plate to cover full width of beam
- Step 9** Place plate on top of nut with rod inserted in the center of the hole
- Step 10** Place other plate under column and center
- Step 11** Center column on footing and beam and affix both
- Step 12** Using holes, affix top plate to beam with 1/4" lags, predrill if necessary
- Step 13** Cast into concrete floor or weld column to base plate and anchor with 2 holes-3/8"Ø A. bolts set in epoxy
- Step 14** Be sure column is in a completely vertical position to support beam



PERMIT TO PRACTICE
MR ENGINEERING LTD.

Date: June 20, 2019

PERMIT NUMBER: P11387

The Association of Professional
 Engineers And Geoscientists of Alberta

55-51308 Range Road 224
 Sherwood Park, Alberta
 Canada, T8C-1H3
 Telephone: (780) 922-5590
 Fax: (780) 922-6509
 Website: ironmangroup.com
 Email: info@ironmangroup.com
 Patent: Can: 2,507,332
 US: 7,775,496



June 20, 2019

LTS 11 & 12 ENGINEERED - 4"x4" (50 ksi)

COLUMN	COLUMN CAPACITIES (lbs)									
	LTS 11					LTS 12				
	HEIGHT	7'6"	8'0"	8'6"	9'0"	9'6"	10'	12'	14'	16'
WSD	63200	61000	58600	55900	52100	50500	42100	35000	28300	
LSD	90200	87500	83200	80500	75400	68800	55900	42200	35000	

PLATE	PLATE CAPACITIES (lbs)									
	Plate Size (in)	LVL (psi)	3.5"	5.25"	7.0"	8.75"	SPF (psi)	4.5"	6.0"	
OPTION TO INTERCHANGE ANY PLATE	WSD	4 x 13	769	35000	14100	18800	23600	436	6900	9200
	LSD		1080	49400	19900	26500	33300	615	9700	13000
	WSD	6 x 13	769	35000	52500	32300	40400	436	25500	34000
	LSD		1080	49400	74000	45500	57000	615	36000	47900
	WSD	8 x 13	769	35000	52500	70000	53900	436	25500	34000
	LSD		1080	49400	74000	98700	76000	615	36000	47900

FOOTING	FOOTING CAPACITIES (lbs)								REINFORCING EVENLY SPACED EITHER WAY AND TIED - SEE FULL FOOTING CHART FOR MORE INSTRUCTION
Soil Bearing Capacity	FOOTING SIZE (in)	PLATE (in)	WSD	LSD	10MM	15MM	20MM		
WSD - 2000 psf LSD - 2800 psf	54 x 54 x 12	8" x 8"	36000	51100	7	5	5		
	60 x 60 x 12	8" x 8"	46200	66200	9	5	5		
	66 x 66 x 12	8" x 8"	56000	79500	12	6	5		
	72 x 72 x 14	8" x 8"	65500	94000	16	9	6		
	78 x 78 x 14	8" x 8"	76500	109600		11	7		
WSD - 2500 psf LSD - 3500 psf	84 x 84 x 14	8" x 8"	88000	125000		12	8		
	54 x 54 x 12	8" x 8"	48000	68200	8	5	5		
	60 x 60 x 12	8" x 8"	58000	82500	10	5	5		
	66 x 66 x 12	8" x 8"	65000	90500	12	6	5		
	72 x 72 x 14	8" x 8"	82500	118000		9	6		
	78 x 78 x 14	8" x 8"	94000	130500		11	7		

NOTE CONSULT FOOTING CHART FOR FURTHER INFORMATION

INSTALL

- Step 1** Measure the distance between bottom of beam and top of footing
- Step 2** Remove both plates from screw assembly by removing the nut
- Step 3** Replace nut on the rod until it reaches the pressed threads
- Step 4** Extend screw to its midpoint for future adjustment
- Step 5** Take measurement of complete column including top and base plates
- Step 6** Take measurement from step # 1 and subtract from step # 5
- Step 7** Cut off difference from bottom of column and be sure cut is true
- Step 8** Choose plate to cover full width of beam
- Step 9** Place plate on top of nut with rod inserted in the center of the hole
- Step 10** Place other plate under column and center
- Step 11** Center column on footing and beam and affix both
- Step 12** Using holes, affix top plate to beam with 1/4" lags, predrill if necessary
- Step 13** Cast into concrete floor or weld column to base plate and anchor with 2 holes-3/8"Ø A. bolts set in epoxy
- Step 14** Be sure column is in a completely vertical position to support beam



PERMIT TO PRACTICE
MR ENGINEERING LTD.

Date: June 20, 2019

PERMIT NUMBER: P11387

The Association of Professional
 Engineers And Geoscientists of Alberta

55-51308 Range Road 224
 Sherwood Park, Alberta
 Canada, T8C-1H3
 Telephone : (780) 922-5590
 Fax : (780) 922-6509
 Website: ironmangroup.com
 Email" info@ironmangroup.com
 Patent: Can: 2,507,332
 US: 7,775,496



LTS P-A 2"x2"x0.125" (50 ksi)

Mar 29, 2018

COLUMN	COLUMN CAPACITIES									
	LTS P									
	HEIGHT	7'6"	8'0"	8'6"	9'0"	9'6"	10'	12'	14'	16'
ENG	WSD	11550	10550	9670	9120	8570	7920			
	LSD	16820	15400	14110	13310	12500	11540			

PLATE	PLATE CAPACITIES									
			BEAM	3.5"	5.25"	7.0"	8.75"	BEAM	4.5"	6.0"
OPTION OF 4 X 7 PLATE FOR FULL USE OF CC	WSD	3.5 x 5.25	769 psi	14100	14100			436 psi	6900	
	LSD		1080 psi	19900	19900			615 psi	9700	
	WSD	4.5 x 6	769 psi	16200	18200			436 psi	11800	11800
	LSD		1080 psi	22800	25700			615 psi	16600	16600
	WSD	4 x 7	769 psi	18800	14100	18800		436 psi	6900	9200
	LSD		1080 psi	26500	19900	26500		615 psi	9700	14800

FOOTING	FOOTING CAPACITIES									TIED - SEE FULL FOOTING CHART FOR MORE	REINFORCING EVENLY
	PSF	FOOTING SIZE	PLATE	WSD	LSD	10MM	15MM	20MM			
	2000	24 x 24 x 9	3/8	8000	11400	3	3				
	2000	30 x 30 x 9	3/8	10000	14200	4	3	3			
	2000	30 x 30 x 9	3/8	12000	17000	4	3	3			
	2000	36 x 36 x 10	3/8	14000	19900	5	3	3			
	2000	36 x 36 x 10	3/8	16000	22700	5	3	3			
	2500	24 x 24 x 9	3/8	8000	11400	3	3				
	2500	24 x 24 x 9	3/8	10000	14200	3	3	3			
	2500	30 x 30 x 9	3/8	12000	17000	4	3	3			
	2500	30 x 30 x 9	3/8	14000	19900	4	3	3			
	2500	36 x 36 x 10	3/8	16000	22700	5	3	3			

NOTE CONSULT FOOTING CHART FOR FURTHER INFORMATION

- COLUMNS MUST HAVE MINIMUM EMBEDMENT OF 3" INTO CONCRETE SLAB
- WITHOUT EMBEDMENT, FOLLOW STEP 13

- | INSTALL | Step | Description |
|---------|---------|----------------------------------------------------------------------------|
| | Step 1 | Measure the distance between bottom of beam and top of footing |
| | Step 2 | Remove both plates from screw assembly by removing the nut |
| | Step 3 | Replace nut on the rod until it reaches the pressed threads |
| | Step 4 | Extend screw to its midpoint for future adjustment |
| | Step 5 | Take measurement of complete column including top and base plates |
| | Step 6 | Take measurement from step # 2 and subtract from step # 6 |
| | Step 7 | Cut off difference from bottom of column and be sure cut is true |
| | Step 8 | Choose plate to cover full width of beam |
| | Step 9 | Place plate on top of nut with rod inserted in the center of the hole |
| | Step 10 | Place other plate under column using centering ring |
| | Step 11 | Center column on footing and beam and affix both |
| | Step 12 | Using holes, affix top plate to beam with 1/4" lags, predrill if necessary |
| | Step 13 | Weld column to base plate and anchor with 4-3/8" Ø A. bolts set in epoxy |
| | Step 14 | Be sure column is in a completely vertical position to support beam |



PERMIT TO PRACTICE
MR ENGINEERING LTD.

Date: March 29, 2018

PERMIT NUMBER: P11387
 The Association of Professional
 Engineers And Geoscientists of Alberta