



**· TRIUMPH ·**

## Cost of metal structures manufacturing per ton

Poles										
I-beam	I 20	I 25	I 30	I 35	I 40	I 45	I 50	I 60	I 70	I 80
	25 000	25 100	21 700	20 900	20 300	20 000	19 600	18 400	18 200	18 000
Shaped tube	□ 80×80	□ 80×120	□ 100×50	□ 100×100	□ 120×120	□ 140×140	□ 160×160	□ 180×180	□ 200×200	□ 250×250
	26 300	26 000	25 700	25 300	25 000	24 600	24 200	24 000	24 100	24 300
Circular pipe	○ 102	○ 108	○ 127	○ 133	○ 159	○ 219	○ 273	○ 325	○ 377	○ 426
	23 000	22 500	22 000	21 500	21 100	20 700	20 200	19 700	19 300	18 800

Tridimensional attached piers										
I-beam	I 20	I 25	I 30	I 35	I 40	I 45	I 50	I 60	I 70	I 80
	28 400	26 500	25 100	24 200	23 600	23 300	22 900	22 200	21 700	21 500
U-section	[ 10	[ 14	[ 16	[ 18	[ 20	[ 22	[ 24	[ 27	[ 30	[ 33
	26 000	26 200	25 800	25 400	24 900	24 500	24 000	23 600	23 200	23 000
Circular pipe	○ 102	○ 108	○ 127	○ 133	○ 159	○ 219	○ 273	○ 325	○ 377	○ 426
	26 400	25 800	25 300	24 900	24 500	24 100	23 600	23 200	22 600	22 200

Floor beams										
I-beam	I 20	I 25	I 30	I 35	I 40	I 45	I 50	I 60	I 70	I 80
	26 200	24 200	22 700	21 900	21 200	20 900	20 500	19 300	19 000	18 800
Lamella	- 6	- 8	- 10	- 12	- 14	- 16	- 18	- 20	- 22	- 25
	33 100	32 700	32 400	32 000	31 600	31 400	31 200	31 000	30 800	30 500

Tie beams										
I-beam	I 20	I 25	I 30	I 35	I 40	I 45	I 50	I 60	I 70	I 80
	23 800	22 000	20 700	19 900	19 300	19 000	18 700	17 900	17 500	17 300
Lamella	- 6	- 8	- 10	- 12	- 14	- 16	- 18	- 20	- 22	- 25
	30 000	29 700	29 400	29 100	28 800	28 500	28 300	28 200	28 000	27 700

Pitched truss										
I-beam	I 20	I 25	I 30	I 35	I 40					
	26 400	26 000	25 600	25 300	25 200					
Shaped tube	□ 80x80	□ 80x120	□ 100x50	□ 100x100	□ 120x120	□ 140x140	□ 160x160	□ 180x180	□ 200x200	
	30 400	29 500	28 200	26 800	25 900	25 100	24 300	23 100	22 000	
L-steel	L 63	L 75	L 100	L 125	L 140	L 160				
	26 000	24 900	23 500	22 400	21 300	20 400				

Secondary truss										
I-beam	I 20	I 25	I 30	I 35	I 40					
	27 700	27 200	26 900	26 600	26 300					
Shaped tube	□ 80x80	□ 80x120	□ 100x50	□ 100x100	□ 120x120	□ 140x140	□ 160x160	□ 180x180	□ 200x200	
	31 900	30 900	29 700	28 300	27 400	26 500	25 700	24 600	23 500	
L-steel	L 63	L 75	L 100	L 125	L 140	L 160				
	27 500	26 400	25 000	23 900	22 800	21 900				

Structure in space										
Circular pipe	○ 22 - ○ 38	○ 40 - ○ 57	○ 60	○ 76	○ 89	○ 102	○ 108			
	37 600	37 200	36 500	36 100	35 700	35 200	34 700			
Shaped tube	□ 80x80	□ 80x120	□ 100x50	□ 100x100	□ 120x120	□ 140x140	□ 160x160	□ 180x180	□ 200x200	
	36 800	35 900	34 600	33 200	32 300	31 500	30 600	29 800	28 900	
L-steel	L 63	L 75	L 100	L 125	L 140	L 160				
	30 900	29 800	28 500	27 400	26 200	25 300				

Tie elements										
L-steel	L 63	L 75	L 100	L 125	L 140	L 160				
	20 400	20 200	20 000	19 900	19 500	19 200				
U-section	[ 10	[ 14	[ 16							
	20 000	19 900	19 500							
Circular pipe	O 60	O 76	O 89	O 102						
	20 400	20 200	20 000	19 500						
Shaped tube	□ 60x60	□ 60x80	□ 80x80	□ 80x120	□ 100x50	□ 100x100	□ 120x120	□ 140x140	□ 160x160	□ 180x180
	20 600	20 400	20 200	20 000	19 900	19 500	19 400	19 200	19 000	18 900

Metal purlins										
I-beam	I 20	I 25	I 30	I 35	I 40	I 45	I 50	I 60	I 70	
	15 700	15 400	15 200	15 000	14 800	14 500				
Shaped tube	□ 100x50	□ 100x100	□ 120x120	□ 140x140	□ 160x160	□ 180x180	□ 200x200	□ 250x250	□ 300x300	
	17 300	17 100	16 800	16 600	16 300	16 000	15 800	15 500	15 300	
U-section	[ 10	[ 14	[ 16	[ 18	[ 20	[ 22	[ 24	[ 27	[ 30	
	17 700	17 400	17 100	16 800	16 500	16 200	15 900	15 600	15 300	

Crane runway beams										
I-beam	I 20	I 25	I 30	I 35	I 40	I 45	I 50	I 60	I 70	I 80
	24 400	22 800	22 500	22 205	21 900	21 600	21 300	21 000	20 700	20 400
Lamella	- 6	- 8	- 10	- 12	- 14	- 16	- 18	- 20	- 22	- 25
	29 200	29 400	29 600	29 800	30 000	30 200	30 400	30 600	30 800	31 000