



# FERRE BARNIEDO®

En acero...todo

## **BODEGA GUADALAJARA**

Carr. antigua a la Capilla 450, Col. La Capilla, Ixtlahuacán de los Membrillos, Jalisco C.P. 45877 • Tel **55 5836 1000**

## **MATRIZ ECATEPEC**

Av. Revolución 81, Col. San Cristobal Ecatepec, Estado de México, C.P. 55024 • Tel **55 5836 1000**

## **BODEGA CHALCO**

Eje 10 Sur Tecamazuchitl, Santa Catarina Yecahuitzotl Valle de Chalco Solidaridad, Estado de México, C.P. 13100  
Tel **55 5862 3120**

## **BODEGA MONCLOVA**

Carlos Salinas de Gortari, Asturias, manzana 052 Monclova, Coahuila de Zaragoza, C.P. 25870  
Tel **55 5836 1000**

## **BODEGA PUEBLA**

Lateral Arco Norte km 2.5 1-B, Parque Industrial Ocotlán Coronango, Puebla • Tel **222 223 1010**

## **BODEGA QUERÉTARO**

Carr. Querétaro - San Luis Potosí 10439, El Salitre Querétaro, C.P. 76230 • Tel **442 103 1200**

## **BODEGA SAN LUIS POTOSÍ**

Eje 140 núm. 125 Zona Industrial del Potosí, Del. La Pila San Luis Potosí, C.P. 78395 • Tel **444 499 9800**



# FERRE BARNIEDO®

En acero...todo



[ventas@ferrebarniedo.com.mx](mailto:ventas@ferrebarniedo.com.mx)

[www.ferrebarniedo.com.mx](http://www.ferrebarniedo.com.mx)

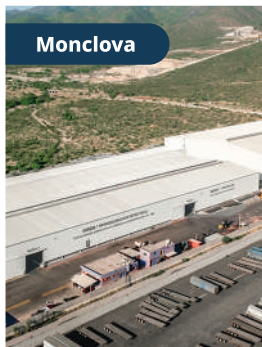
Estamos cerca de ti, conoce nuestras bodegas:



Puebla



Guadalajara



Monclova



San Luis Potosí



Chalco



Querétaro



Ecatepec

## ACEROS PLANOS

|                                       |   |
|---------------------------------------|---|
| Lamiluvr - Lámina con ventana .....   | 2 |
| Lámina galvanizada .....              | 2 |
| Lámina galvanizada lisa en hoja ..... | 3 |
| Lámina y placa antiderrapante .....   | 3 |
| Lámina negra en hoja .....            | 4 |
| Placa de acero en hoja .....          | 5 |

## ACERO DE CONSTRUCCIÓN

|                                |   |
|--------------------------------|---|
| Alambre recocido .....         | 8 |
| Alambrón de construcción ..... | 8 |
| Clavo .....                    | 8 |
| Malla electrosoldada .....     | 8 |
| Varilla corrugada R-42 .....   | 9 |

## ACERO COMERCIAL

|                      |    |
|----------------------|----|
| Ángulo .....         | 11 |
| Cuadrado .....       | 12 |
| Redondo pulido ..... | 12 |
| Redondo .....        | 13 |
| Te .....             | 13 |
| Solera .....         | 14 |

## ACERO ESTRUCTURAL

|                                       |    |
|---------------------------------------|----|
| HSS (Hollow Structural Section) ..... | 17 |
| Canal C.P.S. ....                     | 19 |
| Viga I.P.S. ....                      | 20 |
| Viga I.P.R. ....                      | 21 |

## TUBERÍA

|                           |    |
|---------------------------|----|
| Tubería C-30 .....        | 31 |
| Tubería C-40 .....        | 31 |
| Tubería estructural ..... | 32 |

## PERFILES

|                                                   |    |
|---------------------------------------------------|----|
| Canal Mon-Ten .....                               | 35 |
| Perfil tubular cuadrado pintado y zintro .....    | 36 |
| Perfil tubular rectangular pintado y zintro ..... | 37 |
| Perfil tubular con ceja .....                     | 39 |
| Perfil tubular P.T.R. ....                        | 41 |
| Perfil tubular para ventana y puerta .....        | 43 |
| Tablero pintado y zintro .....                    | 46 |

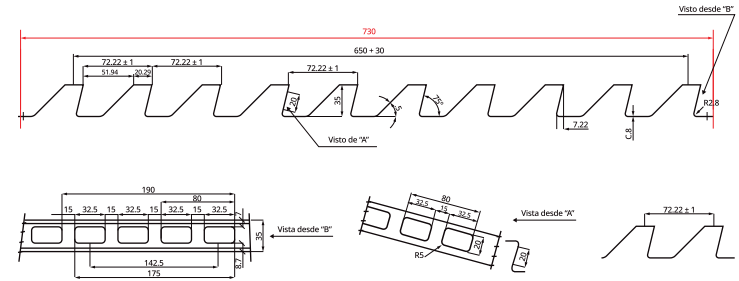
## CENTRO DE SERVICIOS

corte • granallado • pintado • nivelado

## OTROS

|                                  |    |
|----------------------------------|----|
| Tolerancia en espesor ASTM ..... | 53 |
| Factores de conversión .....     | 55 |

| Largo | Ancho | m <sup>2</sup> | ml |
|-------|-------|----------------|----|
| 6 m   | .73 m | 4.38           | 6  |



# ACEROS PLANOS

[www.ferrebarniedo.com.mx](http://www.ferrebarniedo.com.mx)

## LÁMINA GALVANIZADA

|         |                                   |              |          |
|---------|-----------------------------------|--------------|----------|
| 0 - 100 |                                   | Galvadeck 25 |          |
| 0 - 30  | En todas                          | (Losacero)   | En todas |
| 0 - 725 | sus                               | HR-71        | sus      |
| R - 72  | medidas                           | HR-99        | medidas  |
| R - 101 |                                   | RN-100/35    |          |
| R - 90  | Pregunte por las especificaciones |              |          |

**FERRE BARNIEDO**  
En acero...todo



## LÁMINA GALVANIZADA

LISA EN HOJA

| Calibre | Espesor |       | Kg/m  |       | Peso aprox por hoja |         |          |         |          |
|---------|---------|-------|-------|-------|---------------------|---------|----------|---------|----------|
|         | Pulg.   | mm    | 3'    | 4'    | 3' x 6'             | 3' x 8' | 3' x 10' | 4' x 8' | 4' x 10' |
| 10      | .1360   | 3.454 | 24.77 | 33.80 | 45.33               | 60.44   | 75.55    | 80.54   | 100.68   |
| 12      | .1061   | 2.695 | 19.32 | 25.76 | 35.36               | 47.15   | 58.93    | 62.86   | 78.58    |
| 14      | .0762   | 1.936 | 13.87 | 18.50 | 25.38               | 33.84   | 42.30    | 45.14   | 56.44    |
| 16      | .0613   | 1.557 | 11.15 | 14.87 | 20.40               | 27.21   | 34.01    | 36.28   | 45.35    |
| 18      | .0493   | 1.252 | 8.97  | 11.96 | 16.42               | 21.89   | 27.37    | 29.19   | 36.49    |
| 20      | .0374   | .950  | 6.80  | 9.06  | 12.44               | 16.59   | 20.73    | 22.11   | 27.64    |
| 22      | .0314   | .798  | 5.70  | 7.60  | 10.43               | 13.91   | 17.38    | 18.54   | 23.18    |
| 24      | .0224   | .569  | 4.06  | 5.42  | 7.43                | 9.91    | 12.38    | 13.22   | 16.53    |
| 26      | .0194   | .493  | 3.52  | 4.69  | 6.44                | 8.59    | 10.74    | 11.45   | 14.31    |
| 28      | .0164   | .417  | 2.97  | 3.96  | 5.44                | 7.25    | 9.07     | 9.67    | 12.09    |
| 30      | .0135   | .343  | 2.44  |       | 4.47                | 5.96    | 7.45     | 7.83    | 9.79     |

## LÁMINA Y PLACA ANTIDERRAPANTE

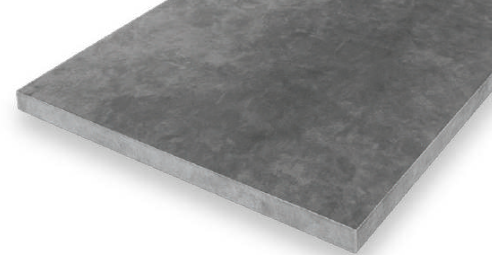
| Calibre | Espesor |      | Peso aprox por hoja |          |         |          |          |
|---------|---------|------|---------------------|----------|---------|----------|----------|
|         | Pulg.   | mm   | 3' x 8'             | 3' x 10' | 4' x 8' | 4' x 10' | 5' x 20' |
| 10      | .134    | 3.42 | 72.14               | 90.18    | 96.19   | 120.24   |          |
| 11      | .119    | 3.04 | 65.29               | 81.60    | 87.04   | 108.81   |          |
| 12      | .104    | 2.66 | 57.15               | 71.44    | 76.20   | 95.25    |          |
| 13      | .089    | 2.28 | 48.96               | 61.23    | 65.28   | 81.60    |          |
| 14      | .074    | 1.90 | 40.82               | 51.03    | 54.43   | 68.03    |          |
| 1/8"    | .125    | 3.18 | 66.95               | 83.69    | 89.27   | 111.58   |          |
| 3/16"   | .187    | 4.76 | 94.71               | 118.39   | 126.28  | 157.85   | 394.63   |
| 1/4"    | .250    | 6.35 | 122.47              | 153.09   | 163.29  | 204.12   | 510.29   |
| 5/16"   | .312    | 7.94 | 150.23              | 187.79   | 200.31  | 250.38   |          |
| 3/8"    | .375    | 9.53 | 177.99              | 222.49   | 237.32  | 296.65   |          |

## LÁMINA NEGRA EN HOJA

| Calibre | Espesor |      | 3' x 8'     | 3' x 10'    | 4' x 8'     | 4' x 10'    | Peso<br>kg / m <sup>2</sup> |
|---------|---------|------|-------------|-------------|-------------|-------------|-----------------------------|
|         | Pulg.   | mm   | .914 x 2.44 | .914 x 3.05 | 1.22 x 2.44 | 1.22 x 3.05 |                             |
| 10      | .1345   | 3.42 | 59.86       | 74.83       | 79.81       | 99.77       | 26.85                       |
| 1/8"    | .1250   | 3.17 | 55.48       | 69.36       | 73.98       | 92.47       | 24.96                       |
| 11      | .1196   | 3.04 | 54.43       | 68.04       | 72.57       | 90.71       | 24.41                       |
| 12      | .1046   | 2.66 | 46.56       | 58.20       | 62.08       | 77.60       | 20.90                       |
| 13      | .0879   | 2.28 | 40.82       | 51.03       | 54.43       | 68.03       | 18.30                       |
| 14      | .0747   | 1.90 | 33.26       | 41.57       | 44.34       | 55.43       | 14.90                       |
| 15      | .0673   | 1.71 | 30.61       | 38.27       | 40.82       | 51.02       | 13.73                       |
| 16      | .0598   | 1.52 | 26.60       | 33.26       | 35.47       | 44.34       | 11.90                       |
| 17      | .0538   | 1.37 | 24.49       | 30.61       | 32.65       | 40.82       | 10.98                       |
| 18      | .0478   | 1.21 | 21.18       | 26.47       | 28.24       | 35.30       | 9.50                        |
| 19      | .0418   | 1.06 | 19.05       | 23.81       | 25.40       | 31.75       | 8.54                        |
| 20      | .0359   | 0.91 | 15.93       | 19.91       | 21.24       | 26.55       | 7.15                        |
| 21      | .0329   | 0.84 | 14.96       | 18.71       | 19.95       | 24.94       | 6.71                        |
| 22      | .0299   | 0.76 | 13.30       | 16.63       | 17.74       | 22.17       | 5.96                        |
| 23      | .0269   | 0.68 | 12.24       | 15.30       | 16.32       | 20.41       | 5.49                        |
| 24      | .0239   | 0.61 | 10.68       | 13.35       | 14.24       | 17.79       | 4.79                        |
| 25      | .0209   | 0.53 | 9.52        | 11.90       | 12.70       | 15.87       | 4.27                        |
| 26      | .0179   | 0.45 | 7.88        | 9.85        | 10.88       | 13.13       | 3.54                        |

# PLACA DE ACERO

## EN HOJA



### Espesor

| Pulg. | 3/16" | 1/4" | 5/16" | 3/8" | 1/2" | 5/8" | 3/4" | 7/8" | 1"   | 1 1/8" | 1 1/4" | 1 3/8" | 1 1/2" | 1 3/4" | 2"   | 2 1/4" | 2 1/2" | 3"   | 3 1/2" |
|-------|-------|------|-------|------|------|------|------|------|------|--------|--------|--------|--------|--------|------|--------|--------|------|--------|
| mm    | 4.8   | 6.4  | 7.9   | 9.5  | 12.7 | 15.9 | 19.1 | 22.2 | 25.4 | 28.6   | 31.7   | 34.9   | 38.1   | 44.5   | 50.8 | 57.1   | 63.5   | 76.2 | 88.9   |

### Peso aprox

| kg / m² | 37.68 | 50.24 | 62.01 | 74.58 | 99.70 | 124.82 | 149.94 | 174.27 | 199.39 | 224.51 | 248.84 | 273.96 | 299.08 | 349.32 | 398.78 | 448.23 | 498.47 | 598.17 | 697.86 |
|---------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|---------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|

### Medidas

pies metros

| 3 x 8  | 0.914 x 2.44 | 84    | 112   | 140   | 168   | 223   |       |       |       |       |  |       |       |       |       |        |        |       |       |
|--------|--------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|-------|-------|-------|-------|--------|--------|-------|-------|
| 3 x 10 | 0.914 x 3.05 | 105   | 140   | 175   | 209   | 279   | 349   | 418   | 487   | 558   |  | 697   |       | 836   |       | 1,115  |        |       |       |
| 3 x 20 | 0.914 x 6.10 | 209   | 279   | 349   | 418   | 558   | 697   | 836   | 975   | 1,115 |  | 1,394 |       | 1,672 |       | 2,230  |        |       |       |
| 4 x 8  | 1.22 x 2.44  | 112   | 149   | 186   | 223   | 298   | 372   |       |       |       |  |       |       |       |       |        |        |       |       |
| 4 x 10 | 1.22 x 3.05  | 140   | 186   | 233   | 279   | 372   | 465   | 558   | 650   | 744   |  | 836   | 929   | 1,022 | 1,115 |        | 1,487  |       |       |
| 4 x 20 | 1.22 x 6.10  | 279   | 372   | 465   | 558   | 744   | 929   | 1,115 | 1,300 | 1,487 |  | 1,858 |       | 2,230 |       | 2,973  |        |       |       |
| 5 x 20 | 1.52 x 6.10  | 349   | 465   | 581   | 697   | 929   | 1,162 | 1,394 | 1,626 | 1,858 |  | 2,090 | 2,322 |       | 2,787 | 3,251  | 3,716  |       | 4,644 |
| 5 x 40 | 1.52 x 12.20 |       |       | 1,161 | 1,394 | 1,858 | 2,322 | 2,787 | 3,251 | 3,716 |  | 4,180 | 4,644 |       | 5,573 | 6,502  | 7,431  |       |       |
| 6 x 20 | 1.83 x 6.10  | 418   | 558   | 697   | 836   | 1,115 | 1,394 | 1,672 | 1,951 | 2,230 |  | 2,508 | 2,787 | 3,066 | 3,344 | 3,901  | 4,459  | 5,016 | 5,573 |
| 6 x 40 | 1.83 x 12.20 | 836   | 1,115 | 1,394 | 1,672 | 2,230 | 2,787 | 3,344 | 3,901 | 4,459 |  | 5,016 | 5,573 | 6,131 | 6,688 | 7,802  | 8,917  |       |       |
| 8 x 20 | 2.44 x 6.10  | 558   | 744   | 929   | 1,115 | 1,487 | 1,858 | 2,230 | 2,601 | 2,973 |  | 3,344 | 3,716 | 4,087 | 4,459 | 5,202  | 5,945  | 6,688 | 7,431 |
| 8 x 40 | 2.44 x 12.20 | 1,115 | 1,487 | 1,858 | 2,230 | 2,973 | 3,716 | 4,459 | 5,202 | 5,945 |  | 6,688 | 7,431 | 8,174 | 8,917 | 10,403 | 11,889 |       |       |

### Tipos de acero que manejamos:

SAE 1010 • ASTM A-36 • A-283-C • A-285-C • H50  
A-709-50/A-572-50 • A-515-70 • A-516-70

# ACERO DE CONSTRUCCIÓN

[www.ferrebarniedo.com.mx](http://www.ferrebarniedo.com.mx)



**FERRE BARNIEDO**  
En acero...todo



## ALAMBRE RECOCIDO

Calibre

Rollo

16"

45 a 70 kg / pza

## ALAMBRÓN DE CONSTRUCCIÓN

Pulg.

F Pulg.

mm

Kg / m

0.218

7/32"

5.55

0.189

0.250

1/4"

6.35

0.249



## CLAVO



Pulg.

mm

Kg / caja

2"

50.8

25

2 1/2"

63.5

25

3"

76.2

25

3 1/2"

88.9

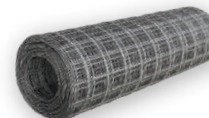
25

4"

101.6

25

## MALLA ELECTROSOLDADA



Diseño

Ancho

Largo

Peso aprox

m

m

kg / m<sup>2</sup>

66 - 44

2.50

40

2.71

66 - 66

2.50

40

1.98

66 - 88

2.50

40

1.41

66- 1010

2.50

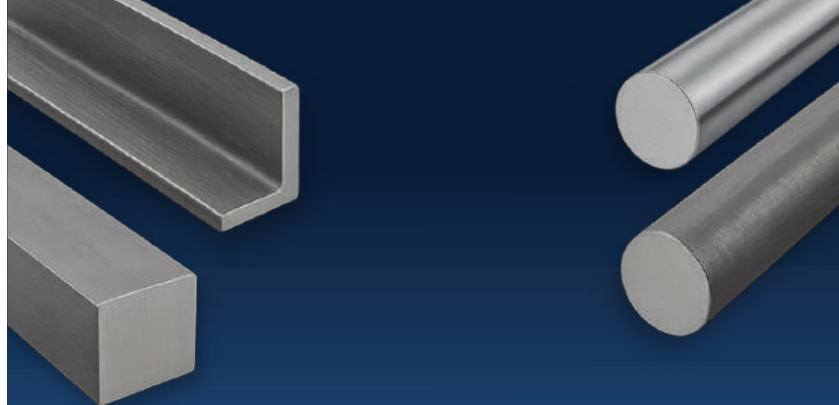
40

0.98

## VARILLA CORRUGADA R-42



| Número | Pulgada | Milímetro | kg / m | kg x pza | Pzas. aprox de<br>12 m x ton. |
|--------|---------|-----------|--------|----------|-------------------------------|
| 2.5    | 5/16"   | 7.9       | 0.38   | 4.66     | 214                           |
| 3      | 3/8"    | 9.5       | 0.55   | 6.71     | 148                           |
| 4      | 1/2"    | 12.7      | 0.97   | 11.93    | 83                            |
| 5      | 5/8"    | 15.9      | 1.52   | 18.65    | 53                            |
| 6      | 3/4"    | 19.1      | 2.20   | 26.85    | 37                            |
| 8      | 1"      | 25.4      | 3.91   | 47.73    | 20                            |
| 10     | 1 1/4"  | 31.8      | 6.11   | 74.58    | 13                            |
| 12     | 1 1/2"  | 38.1      | 8.80   | 107.40   | 9                             |



# ACEROS COMERCIALES

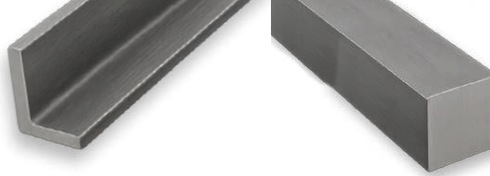
[www.ferrebarniedo.com.mx](http://www.ferrebarniedo.com.mx)



**FERRE BARNIEDO**  
En acero...todo



# ÁNGULO



# CUADRADO

| Pulgada | Milímetro | Peso<br>kg / m |
|---------|-----------|----------------|
| 0.109 x | 3/4"      | 19.1 0.76      |
|         | 1"        | 25.4 1.04      |
|         | 1 1/4"    | 31.7 1.32      |
|         | 1 1/2"    | 38.1 1.59      |
| 1/8" x  | 3/4"      | 19.1 0.87      |
|         | 1"        | 25.4 1.18      |
|         | 1 1/4"    | 31.7 1.50      |
|         | 1 1/2"    | 38.1 1.81      |
|         | 1 3/4"    | 44.5 2.13      |
|         | 2"        | 50.8 2.45      |
| 3/16" x | 1"        | 25.4 1.72      |
|         | 1 1/4"    | 31.7 2.19      |
|         | 1 1/2"    | 38.1 2.67      |
|         | 1 3/4"    | 44.5 3.14      |
|         | 2"        | 50.8 3.61      |
|         | 2 1/2"    | 63.5 4.57      |
| 1/4" x  | 3"        | 76.2 5.51      |
|         | 1"        | 25.4 2.21      |
|         | 1 1/4"    | 31.7 2.84      |
|         | 1 1/2"    | 38.1 3.48      |
|         | 2"        | 50.8 4.74      |
|         | 2 1/2"    | 63.5 6.01      |
|         | 3"        | 76.2 7.28      |
|         | 3 1/2"    | 88.9 8.54      |
|         | 4"        | 101.6 9.81     |

| Pulgada | Milímetro | Peso<br>kg / m      |
|---------|-----------|---------------------|
| 5/16" x | 2"        | 50.8 5.83           |
|         | 2 1/2"    | 63.5 7.41           |
|         | 3"        | 76.2 9.00           |
|         | 3 1/2"    | 88.9 10.58          |
|         | 4"        | 101.6 12.16         |
|         | 5"        | 127.0 15.33         |
| 3/8" x  | 2"        | 50.8 6.88           |
|         | 2 1/2"    | 63.5 8.78           |
|         | 3"        | 76.2 10.68          |
|         | 3 1/2"    | 88.9 12.58          |
|         | 4"        | 101.6 14.48         |
|         | 5"        | 127.0 18.28         |
| 1/2" x  | 6"        | 152.4 22.07         |
|         | 3"        | 76.2 13.92          |
|         | 3 1/2"    | 88.9 16.45          |
|         | 4"        | 101.6 18.99         |
|         | 5"        | 127.0 24.05         |
|         | 6"        | 152.4 29.12         |
| 5/8" x  | 4"        | 101.6 23.34         |
|         | 6"        | 152.4 36.00         |
|         | 8"        | 203.2 48.40         |
|         | 6"        | 152.4 42.73         |
| 3/4" x  | 8"        | 203.2 57.92         |
| 7/8" x  | 8"        | 222.2 x 203.2 67.02 |
| 1" x    | 8"        | 25.4x 203.2 75.96   |

| Dimensión |      | Peso aprox |                 |         |
|-----------|------|------------|-----------------|---------|
| Pulg.     | mm   | kg x m     | kg x pza (6.1m) |         |
| 3/8"      | 9.5  | 0.71       | 4.34            | torcido |
| 0.472     | 12.0 | 1.13       | 6.90            | torcido |
| 1/2"      | 12.7 | 1.26       | 7.72            | torcido |
| 5/8"      | 15.9 | 1.97       | 12.07           | torcido |
| 3/4"      | 19.1 | 2.84       | 17.38           |         |
| 7/8"      | 22.2 | 3.87       | 23.65           |         |
| 1"        | 25.4 | 5.06       | 30.89           |         |
| 1 ¼"      | 31.7 | 7.91       | 48.27           |         |
| 1 ½"      | 38.1 | 11.39      | 69.51           |         |
| 2"        | 50.8 | 20.25      | 123.57          |         |



# REDONDO PULIDO

| Pulgada | Milímetro | Peso aprox<br>kg / m | kg x pieza<br>6.00 m |
|---------|-----------|----------------------|----------------------|
| 3/16"   | 4.8       | 0.14                 | 0.86                 |
| 1/4"    | 6.3       | 0.24                 | 1.48                 |
| 5/16"   | 7.9       | 0.38                 | 2.32                 |
| 3/8"    | 9.5       | 0.56                 | 3.36                 |
| 1/2"    | 12.7      | 1.00                 | 6.00                 |

## REDONDO

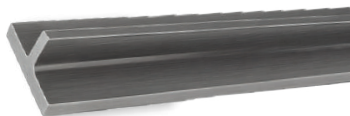
| Pulgada | Milímetro | Peso aprox<br>kg / m | kg x pieza<br>6.10 m |
|---------|-----------|----------------------|----------------------|
| 3/8"    | 9.5       | 0.55                 | 3.41                 |
| 7/16"   | 11.1      | 0.76                 | 4.64                 |
| .472    | 12.0      | 0.88                 | 5.42                 |
| 1/2"    | 12.7      | 0.99                 | 6.07                 |
| 9/16"   | 14.3      | 1.25                 | 7.67                 |
| 5/8"    | 15.9      | 1.55                 | 9.48                 |
| 3/4"    | 19.1      | 2.23                 | 13.65                |
| 7/8"    | 22.2      | 3.04                 | 18.58                |
| 15/16"  | 23.8      | 3.49                 | 21.33                |
| 1"      | 25.4      | 3.97                 | 24.26                |
| 1 1/8"  | 28.6      | 5.03                 | 30.71                |
| 1 1/4"  | 31.8      | 6.21                 | 37.91                |
| 1 3/8"  | 34.9      | 7.51                 | 45.87                |
| 1 1/2"  | 38.1      | 8.94                 | 54.59                |
| 1 3/4"  | 44.5      | 12.18                | 74.31                |
| 2"      | 50.8      | 15.90                | 97.05                |
| 2 1/4"  | 57.1      | 20.13                | 122.83               |
| 2 1/2"  | 63.5      | 24.86                | 151.65               |



## SOLERA DE MOLINO Y SOLERA DE SLITTER

| Pulgada        | Milímetro  | Peso<br>kg / m |
|----------------|------------|----------------|
| 1/2"           | 12.7       | 0.31           |
| 5/8"           | 15.9       | 0.38           |
| 3/4"           | 19.1       | 0.47           |
| 1/8" x 1"      | 3.2 x 25.4 | 0.63           |
| 1 1/4"         | 31.7       | 0.79           |
| 1 1/2"         | 38.1       | 0.94           |
| 2"             | 50.8       | 1.26           |
| 1/2"           | 12.7       | 0.47           |
| 5/8"           | 15.9       | 0.58           |
| 3/4"           | 19.1       | 0.71           |
| 1"             | 25.4       | 0.94           |
| 3/16" x 1 1/4" | 4.8 x 31.7 | 1.18           |
| 1 1/2"         | 38.1       | 1.42           |
| 2"             | 50.8       | 1.90           |
| 2 1/2"         | 63.5       | 2.37           |
| 3"             | 76.2       | 2.84           |
| 4"             | 101.6      | 3.79           |
| 1/2"           | 12.7       | 0.63           |
| 3/4"           | 19.1       | 0.94           |
| 1"             | 25.4       | 1.26           |
| 1 1/4"         | 31.7       | 1.58           |
| 1 1/2"         | 38.1       | 1.90           |
| 1/4" x 2"      | 6.3 x 50.8 | 2.53           |
| 2 1/2"         | 63.5       | 3.16           |
| 3"             | 76.2       | 3.79           |
| 4"             | 101.6      | 5.06           |
| 5"             | 127.0      | 6.33           |
| 6"             | 152.4      | 7.59           |

| Pulgada    | Milímetro   | Peso<br>kg / m |
|------------|-------------|----------------|
| 8"         | 203.2       | 10.12          |
| 1/4" x 10" | 6.3 x 254.0 | 12.66          |
| 12"        | 304.8       | 15.19          |
| 1"         | 25.4        | 1.58           |
| 1 1/4"     | 31.7        | 1.97           |
| 1 1/2"     | 38.1        | 2.37           |
| 2"         | 50.8        | 3.16           |
| 2 1/2"     | 63.5        | 3.95           |
| 3"         | 76.2        | 4.74           |
| 5/16" x 4" | 7.9 x 101.6 | 6.33           |
| 5"         | 127.0       | 7.91           |
| 6"         | 152.4       | 9.49           |
| 8"         | 203.0       | 12.66          |
| 10"        | 254.0       | 15.82          |
| 12"        | 304.8       | 18.99          |
| 1"         | 25.4        | 1.90           |
| 1 1/4"     | 31.7        | 2.37           |
| 1 1/2"     | 38.1        | 2.84           |
| 2"         | 50.8        | 3.79           |
| 2 1/2"     | 63.5        | 4.74           |
| 3"         | 76.2        | 5.69           |
| 3/8" x 4"  | 9.5 x 101.6 | 7.59           |
| 5"         | 127.0       | 9.49           |
| 6"         | 152.4       | 11.39          |
| 8"         | 203.2       | 15.19          |
| 10"        | 254.0       | 18.99          |
| 12"        | 304.8       | 22.79          |



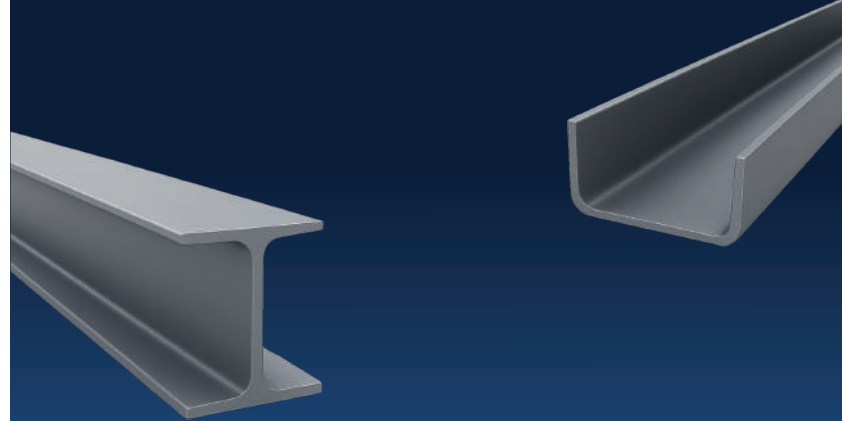
## TE

| Pulgada   | Milímetro  | Peso aproximado<br>kg / m | kg / pza (6 m) |
|-----------|------------|---------------------------|----------------|
| 1/8" x 1" | 3.2 x 25.4 | 1.33                      | 8.00           |

# SOLERA

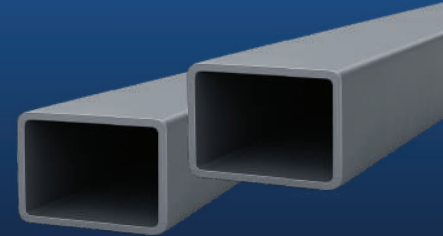
DE MOLINO Y SOLERA DE SLITTER

|        | Pulgada | Milímetro | Peso<br>kg / m |        | Pulgada | Milímetro | Peso<br>kg / m |
|--------|---------|-----------|----------------|--------|---------|-----------|----------------|
| 1/2" x | 1"      | 25.4      | 2.53           | 3/4" x | 1 1/4"  | 31.7      | 4.74           |
|        | 1 1/4"  | 31.7      | 3.16           |        | 1 1/2"  | 38.1      | 5.69           |
|        | 1 1/2"  | 38.1      | 3.79           |        | 2"      | 50.8      | 7.59           |
|        | 2"      | 50.8      | 5.06           |        | 2 1/2"  | 63.5      | 9.49           |
|        | 2 1/2"  | 63.5      | 6.33           |        | 3"      | 76.2      | 11.39          |
|        | 3"      | 76.2      | 7.59           |        | 4"      | 101.6     | 15.19          |
|        | 4"      | 101.6     | 10.12          |        | 5"      | 127.0     | 18.99          |
|        | 5"      | 127.0     | 12.66          |        | 6"      | 152.4     | 22.79          |
|        | 6"      | 152.4     | 15.19          |        | 8"      | 203.2     | 30.38          |
|        | 8"      | 203.2     | 20.25          |        | 10"     | 254.0     | 37.98          |
| 5/8" x | 10"     | 254.0     | 25.32          | 1" x   | 12"     | 304.8     | 45.58          |
|        | 12"     | 304.8     | 30.38          |        | 1 1/2"  | 38.1      | 7.59           |
|        | 1 1/4"  | 31.7      | 3.95           |        | 2"      | 50.8      | 10.12          |
|        | 1 1/2"  | 38.1      | 4.74           |        | 3"      | 76.2      | 15.19          |
|        | 2"      | 50.8      | 6.33           |        | 4"      | 101.6     | 20.25          |
|        | 2 1/2"  | 63.5      | 7.91           |        | 5"      | 127.0     | 25.32          |
|        | 3"      | 76.2      | 9.49           |        | 6"      | 152.4     | 30.38          |
|        | 4"      | 101.6     | 12.66          |        | 8"      | 203.2     | 40.51          |
|        | 5"      | 127.0     | 15.82          |        | 10"     | 254.0     | 50.64          |
|        | 6"      | 152.4     | 18.99          |        | 12"     | 304.8     | 60.77          |
| 1" x   | 8"      | 203.2     | 25.32          |        |         |           |                |
|        | 10"     | 254.0     | 31.65          |        |         |           |                |
|        | 12"     | 304.8     | 37.98          |        |         |           |                |
|        |         |           |                |        |         |           |                |
|        |         |           |                |        |         |           |                |
|        |         |           |                |        |         |           |                |
|        |         |           |                |        |         |           |                |
|        |         |           |                |        |         |           |                |
|        |         |           |                |        |         |           |                |
|        |         |           |                |        |         |           |                |



# ACERO ESTRUCTURAL

www.ferrebarniedo.com.mx

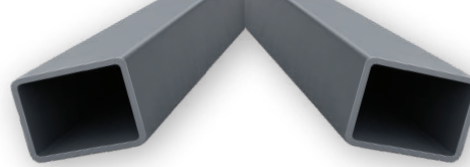


**FERRE BARNIEDO**

En acero...todo



## HSS HOLLOW STRUCTURAL SECTION

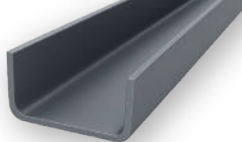


## HSS HOLLOW STRUCTURAL SECTION

| Pulg.     | 3/16"  | 1/4"   | 5/16"  | 3/8"   | 1/2"    | 5/8"    | 3/4"    | 7/8" |
|-----------|--------|--------|--------|--------|---------|---------|---------|------|
| 3" x 2"   | 50.75  | 64.54  |        |        |         |         |         |      |
| 3" x 3"   | 125.17 | 159.70 |        |        |         |         |         |      |
| 4" x 2"   | 125.17 | 159.70 |        |        |         |         |         |      |
| 4" x 3"   | 148.02 | 190.52 | 230.60 |        |         |         |         |      |
| 4" x 4"   | 171.05 | 221.70 | 269.24 | 313.54 |         |         |         |      |
| 5" x 2"   | 147.99 | 190.81 |        |        |         |         |         |      |
| 5" x 3"   | 171.05 | 221.67 | 269.24 | 313.54 |         |         |         |      |
| 5" x 5"   | 217.28 | 283.66 | 346.35 | 406.14 |         |         |         |      |
| 6" x 2"   | 171.05 | 221.38 | 269.24 |        |         |         |         |      |
| 6" x 3"   | 194.22 | 252.54 | 307.90 |        |         |         |         |      |
| 6" x 4"   | 217.28 | 283.65 | 346.18 | 406.14 | 515.82  |         |         |      |
| 6" x 6"   | 263.76 | 345.38 | 423.71 | 498.98 | 639.77  |         |         |      |
| 7" x 3"   |        | 141.83 |        |        |         |         |         |      |
| 7" x 7"   | 310.12 | 407.11 | 500.92 | 591.52 |         |         |         |      |
| 8" x 4"   | 263.76 | 345.38 | 423.70 | 498.85 | 639.77  |         |         |      |
| 8" x 6"   | 310.12 | 406.99 | 500.93 | 591.46 | 763.48  | 921.47  |         |      |
| 8" x 8"   | 356.36 | 468.72 | 578.09 | 684.29 | 886.94  | 1076.30 |         |      |
| 10" x 4"  | 310.12 | 406.99 | 500.90 | 591.50 | 763.48  |         |         |      |
| 10" x 5"  |        |        | 539.48 |        |         |         |         |      |
| 10" x 6"  | 356.36 | 468.85 | 578.10 | 684.30 | 886.94  | 1076.30 |         |      |
| 10" x 8"  | 402.72 | 530.70 |        | 776.89 | 1010.53 |         |         |      |
| 10" x 10" | 448.96 | 592.42 | 732.59 | 869.62 | 1133.90 | 1385.00 | 1661.28 |      |

| Pulg.     | 3/16"  | 1/4"   | 5/16"   | 3/8"    | 1/2"    | 5/8"    | 3/4"    | 7/8"    |
|-----------|--------|--------|---------|---------|---------|---------|---------|---------|
| 12" x 4"  | 356.36 | 468.72 | 578.09  | 684.30  | 886.94  |         |         |         |
| 12" x 6"  | 402.72 | 530.70 | 654.99  | 776.89  | 1010.50 | 1230.97 |         |         |
| 12" x 8"  | 448.96 | 592.42 | 732.59  | 869.61  | 1134.00 | 1385.00 |         |         |
| 12" x 12" |        | 715.90 | 887.09  | 1054.80 | 1381.00 | 1697.02 | 1988.60 |         |
| 14" x 6"  |        | 592.43 | 732.59  | 869.62  | 1134.00 | 1384.90 |         |         |
| 14" x 10" |        | 715.89 | 887.09  | 1054.80 | 1358.40 | 1693.50 |         |         |
| 14" x 14" |        |        | 1041.40 | 1240.30 | 1628.20 | 2000.00 | 2366.80 |         |
| 16" x 4"  |        | 592.42 | 732.61  | 869.62  | 1134.00 |         |         |         |
| 16" x 8"  |        | 715.89 | 887.09  | 1054.80 | 1381.00 | 1693.50 |         |         |
| 16" x 12" |        |        | 1041.40 | 1240.20 | 1628.20 | 2000.00 |         |         |
| 16" x 16" |        |        | 1195.90 | 1425.60 | 1875.50 | 2306.00 | 2732.80 |         |
| 18" x 4"  |        |        |         |         | 1257.70 |         |         |         |
| 18" x 6"  |        | 715.89 | 887.09  |         | 1381.00 | 1697.02 |         |         |
| 18" x 18" |        |        |         |         | 2123.00 | 2623.00 | 3099.00 | 3574.60 |
| 20" x 8"  |        |        |         | 1240.30 | 1628.20 | 2000.00 |         |         |
| 20" x 12" |        |        | 1195.90 | 1425.60 | 1875.50 |         |         |         |
| 20" x 20" |        |        |         |         | 2367.00 | 2928.00 | 3477.00 | 4013.80 |
| 22" x 22" |        |        |         |         | 2590.00 | 3481.00 | 3849.00 | 4445.00 |
| 24" x 12" |        |        |         |         | 2123.00 | 2623.00 | 3099.00 |         |
| 25" x 25" |        |        |         |         | 2960.00 |         | 4527.00 | 5260.00 |

## CANAL C.P.S.

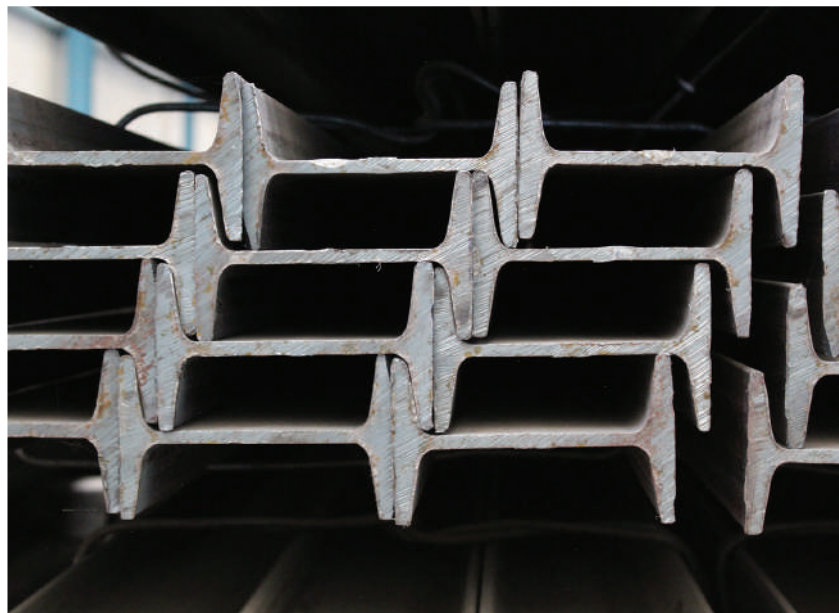


| Altura o Peralte |       | Peso aprox |        | Patín (mm) |         | Alma (mm) |
|------------------|-------|------------|--------|------------|---------|-----------|
| Pulg.            | mm    | lb / ft    | kg / m | ancho      | espesor |           |
| 3"               | 76.2  | 3.50       | 5.21   | 34.8       | 7       | 3         |
| 3"               | 76.2  | 4.10       | 6.10   | 35.8       | 7       | 4         |
| 4"               | 101.6 | 4.50       | 6.70   | 40.1       | 7       | 3         |
| 4"               | 101.6 | 5.40       | 8.04   | 40.2       | 8       | 5         |
| 5"               | 127.0 | 6.70       | 9.97   | 44.4       | 6       | 4         |
| 6"               | 152.4 | 8.20       | 12.20  | 48.7       | 9       | 5         |
| 6"               | 152.4 | 10.50      | 15.63  | 51.5       | 9       | 8         |
| 6"               | 152.4 | 13.00      | 19.35  | 55.0       | 9       | 11        |
| 8"               | 203.2 | 11.50      | 17.11  | 57.4       | 10      | 6         |
| 8"               | 203.2 | 13.75      | 20.46  | 60.0       | 10      | 8         |
| 8"               | 203.2 | 18.75      | 27.90  | 64.0       | 10      | 12        |
| 10"              | 254.0 | 15.30      | 22.77  | 66.1       | 11      | 6         |
| 10"              | 254.0 | 20.00      | 29.76  | 69.8       | 11      | 10        |
| 10"              | 254.0 | 25.00      | 37.20  | 73.3       | 11      | 13        |
| 10"              | 254.0 | 30.00      | 44.65  | 77.1       | 11      | 17        |
| 12"              | 304.8 | 20.70      | 30.81  | 74.3       | 11      | 7         |
| 12"              | 304.8 | 25.00      | 37.20  | 77.4       | 11      | 10        |
| 12"              | 304.8 | 30.00      | 44.65  | 80.6       | 11      | 13        |
| 15"              | 381.0 | 33.90      | 50.45  | 85.7       | 11      | 10        |
| 15"              | 381.0 | 40.00      | 59.53  | 88.9       | 11      | 13        |
| 15"              | 381.0 | 50.00      | 74.41  | 90.4       | 12      | 18        |

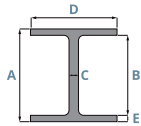
## VIGA I.P.S.



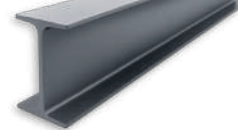
| Peralte |       | Patín mm | Alma mm | Peso aprox kg / m |
|---------|-------|----------|---------|-------------------|
| Pulg.   | mm    |          |         |                   |
| 3"      | 76.2  | 59.23    | 4.3     | 8.48              |
| 4"      | 101.6 | 67.64    | 4.9     | 11.45             |
| 5"      | 127.0 | 76.30    | 5.4     | 14.88             |
| 6"      | 152.4 | 84.63    | 5.9     | 18.60             |
| 8"      | 203.2 | 89.99    | 7.5     | 26.19             |



# VIGA I.P.R.



A Peralte exterior  
B Peralte interior  
C Alma  
D Ancho patín  
E Espesor patín



| Dimensión<br>Pulgadas | Peso aprox<br>lb / ft kg / m | Peralte<br>ext. mm | Peralte<br>int. mm | Alma<br>mm | Ancho<br>patín mm | Espesor<br>patín mm |
|-----------------------|------------------------------|--------------------|--------------------|------------|-------------------|---------------------|
| 4 x 4                 | 13 19.35                     | 106                | 88                 | 7.1        | 103               | 8.8                 |
| 5 x 5                 | 16 23.81                     | 127                | 109                | 6.1        | 127               | 9.1                 |
| 5 x 5                 | 19 28.28                     | 131                | 109                | 6.9        | 128               | 10.9                |
| 6 x 4                 | 8.5 12.65                    | 148                | 140                | 4.3        | 100               | 4.9                 |
| 6 x 4                 | 9 13.39                      | 150                | 139                | 4.3        | 100               | 5.5                 |
| 6 x 4                 | 12 17.86                     | 153                | 138                | 5.8        | 102               | 7.1                 |
| 6 x 4                 | 16 23.81                     | 160                | 139                | 6.6        | 102               | 10.3                |
| 6 x 6                 | 15 22.32                     | 152                | 139                | 5.8        | 152               | 6.6                 |
| 6 x 6                 | 20 29.76                     | 157                | 138                | 6.6        | 153               | 9.3                 |
| 6 x 6                 | 25 37.20                     | 162                | 139                | 8.1        | 154               | 11.6                |
| 8 x 4                 | 10 14.88                     | 200                | 190                | 4.3        | 100               | 5.2                 |
| 8 x 4                 | 13 19.35                     | 203                | 190                | 5.8        | 102               | 6.5                 |
| 8 x 4                 | 15 22.32                     | 206                | 190                | 6.2        | 102               | 8.0                 |
| 8 x 5 ¼"              | 18 26.79                     | 207                | 190                | 5.8        | 133               | 8.4                 |
| 8 x 5 ¼"              | 21 31.25                     | 210                | 190                | 6.4        | 134               | 10.2                |
| 8 x 6 ½"              | 24 35.72                     | 201                | 181                | 6.2        | 165               | 10.2                |
| 8 x 6 ½"              | 28 41.67                     | 205                | 181                | 7.2        | 166               | 11.8                |
| 8 x 8                 | 31 46.13                     | 203                | 181                | 7.2        | 203               | 11.0                |
| 8 x 8                 | 35 52.09                     | 206                | 181                | 7.9        | 204               | 12.6                |
| 8 x 8                 | 40 59.53                     | 210                | 182                | 9.1        | 205               | 14.2                |
| 8 x 8                 | 48 71.43                     | 216                | 181                | 10.2       | 206               | 17.4                |
| 8 x 8                 | 58 86.31                     | 222                | 181                | 13.0       | 209               | 20.6                |
| 8 x 8                 | 67 99.71                     | 229                | 182                | 14.5       | 210               | 23.7                |
| 10 x 4                | 12 17.86                     | 251                | 240                | 4.8        | 101               | 5.3                 |

# VIGA I.P.R.

| Dimensión<br>Pulgadas | Peso aprox<br>lb / ft kg / m | Peralte<br>ext. mm | Peralte<br>int. mm | Alma<br>mm | Ancho<br>patín mm | Espesor<br>patín mm |
|-----------------------|------------------------------|--------------------|--------------------|------------|-------------------|---------------------|
| 10 x 4                | 15 22.32                     | 254                | 240                | 5.8        | 102               | 6.9                 |
| 10 x 4                | 17 25.30                     | 257                | 240                | 6.1        | 102               | 8.4                 |
| 10 x 4                | 19 28.28                     | 260                | 240                | 6.4        | 102               | 10.0                |
| 10 x 5 ¾"             | 22 32.74                     | 258                | 240                | 6.1        | 146               | 9.1                 |
| 10 x 5 ¾"             | 26 38.69                     | 262                | 240                | 6.6        | 147               | 11.2                |
| 10 x 5 ¾"             | 30 44.65                     | 266                | 240                | 7.6        | 148               | 13.0                |
| 10 x 8                | 33 49.10                     | 247                | 225                | 7.4        | 202               | 11.0                |
| 10 x 8                | 39 58.04                     | 252                | 225                | 8.0        | 203               | 13.5                |
| 10 x 8                | 45 67.00                     | 257                | 226                | 8.9        | 202               | 16.0                |
| 10 x 10               | 49 72.90                     | 253                | 225                | 8.6        | 254               | 14.2                |
| 10 x 10               | 54 80.40                     | 256                | 225                | 9.4        | 255               | 15.6                |
| 10 x 10               | 60 89.30                     | 260                | 225                | 10.7       | 256               | 17.3                |
| 10 x 10               | 68 101.20                    | 264                | 225                | 11.9       | 257               | 19.6                |
| 10 x 10               | 77 115.00                    | 269                | 225                | 13.5       | 259               | 22.1                |
| 10 x 10               | 88 131.00                    | 275                | 225                | 15.4       | 261               | 25.1                |
| 10 x 10               | 100 148.82                   | 282                | 225                | 17.3       | 263               | 28.4                |
| 10 x 10               | 112 166.68                   | 289                | 225                | 19.2       | 265               | 31.8                |
| 12 x 4                | 14 20.83                     | 303                | 292                | 5.0        | 101               | 5.7                 |
| 12 x 4                | 16 23.81                     | 305                | 292                | 5.6        | 101               | 6.7                 |
| 12 x 4                | 19 28.28                     | 309                | 291                | 6.0        | 102               | 8.9                 |
| 12 x 4                | 22 32.74                     | 313                | 291                | 6.6        | 102               | 10.8                |
| 12 x 6 ½"             | 26 38.74                     | 310                | 291                | 5.8        | 165               | 9.7                 |
| 12 x 6 ½"             | 30 44.65                     | 313                | 291                | 6.6        | 166               | 11.2                |
| 12 x 6 ½"             | 35 52.09                     | 318                | 291                | 7.6        | 167               | 13.2                |
| 12 x 8                | 40 59.53                     | 303                | 277                | 7.5        | 203               | 13.1                |
| 12 x 8                | 45 66.97                     | 306                | 277                | 8.5        | 204               | 14.6                |
| 12 x 8                | 50 74.41                     | 310                | 277                | 9.4        | 205               | 16.3                |
| 12 x 10               | 53 78.90                     | 306                | 277                | 8.8        | 254               | 14.6                |
| 12 x 10               | 58 86.30                     | 310                | 277                | 9.1        | 254               | 16.3                |
| 12 x 12               | 65 96.70                     | 308                | 277                | 9.9        | 305               | 15.4                |
| 12 x 12               | 72 107.15                    | 311                | 277                | 10.9       | 306               | 17.0                |
| 12 x 12               | 79 118.00                    | 314                | 277                | 11.9       | 307               | 18.7                |

## VIGA I.P.R.

| Dimensión  | Peso aprox |        | Peralte | Peralte | Alma | Ancho    | Espesor  |
|------------|------------|--------|---------|---------|------|----------|----------|
| Pulgadas   | lb / ft    | kg / m | ext. mm | int. mm | mm   | patín mm | patín mm |
| 12 x 12    | 87         | 129.00 | 318     | 277     | 13.1 | 308      | 20.6     |
| 12 x 12    | 96         | 143.00 | 323     | 277     | 14.0 | 309      | 22.9     |
| 12 x 12    | 106        | 158.00 | 327     | 277     | 15.5 | 310      | 25.1     |
| 12 x 12    | 120        | 179.00 | 333     | 277     | 18.0 | 312      | 28.1     |
| 12 x 12    | 136        | 202.39 | 341     | 277     | 20.1 | 315      | 31.8     |
| 12 x 12    | 152        | 226.20 | 348     | 277     | 22.1 | 317      | 35.6     |
| 12 x 12    | 170        | 252.99 | 356     | 277     | 24.4 | 319      | 39.6     |
| 12 x 12    | 190        | 282.75 | 365     | 277     | 26.9 | 322      | 44.1     |
| 12 x 12    | 210        | 312.52 | 374     | 277     | 30.0 | 325      | 48.3     |
| 12 x 12    | 230        | 342.28 | 382     | 277     | 32.6 | 328      | 52.6     |
| 12 x 12    | 252        | 375.02 | 392     | 277     | 36.0 | 332      | 58.0     |
| 12 x 12    | 279        | 415.20 | 400     | 277     | 38.0 | 335      | 64.0     |
| 12 x 12    | 336        | 500.03 | 405     | 277     | 42.0 | 339      | 74.0     |
| 14 x 5     | 22         | 32.74  | 349     | 332     | 5.8  | 127      | 8.5      |
| 14 x 5     | 26         | 38.69  | 353     | 332     | 6.4  | 128      | 10.7     |
| 14 x 6 ¾"  | 30         | 44.65  | 352     | 332     | 6.9  | 171      | 9.8      |
| 14 x 6 ¾"  | 34         | 50.60  | 355     | 332     | 7.2  | 171      | 11.6     |
| 14 x 6 ¾"  | 38         | 56.65  | 358     | 332     | 7.9  | 172      | 13.1     |
| 14 x 8     | 43         | 63.99  | 347     | 320     | 7.8  | 203      | 13.5     |
| 14 x 8     | 48         | 71.43  | 350     | 320     | 8.6  | 204      | 15.1     |
| 14 x 8     | 53         | 78.87  | 354     | 320     | 9.4  | 205      | 16.8     |
| 14 x 10    | 61         | 90.78  | 353     | 320     | 9.5  | 254      | 16.4     |
| 14 x 10    | 68         | 101.20 | 357     | 320     | 10.5 | 255      | 18.3     |
| 14 x 10    | 74         | 110.00 | 360     | 320     | 11.4 | 256      | 19.9     |
| 14 x 10    | 82         | 122.00 | 363     | 320     | 13.0 | 257      | 21.7     |
| 14 x 14 ½" | 90         | 133.94 | 356     | 320     | 11.2 | 369      | 18.0     |
| 14 x 14 ½" | 99         | 147.33 | 360     | 320     | 12.3 | 370      | 19.8     |
| 14 x 14 ½" | 109        | 162.21 | 364     | 320     | 13.3 | 371      | 21.8     |
| 14 x 14 ½" | 120        | 178.58 | 368     | 320     | 15.0 | 373      | 23.9     |
| 14 x 14 ½" | 132        | 196.44 | 372     | 320     | 16.4 | 374      | 26.2     |
| 14 x 16    | 145        | 215.79 | 375     | 320     | 17.3 | 394      | 27.7     |
| 14 x 16    | 159        | 236.62 | 380     | 320     | 18.9 | 395      | 30.2     |

## VIGA I.P.R.

| Dimensión  | Peso aprox |        | Peralte | Peralte | Alma | Ancho    | Espesor  |
|------------|------------|--------|---------|---------|------|----------|----------|
| Pulgadas   | lb / ft    | kg / m | ext. mm | int. mm | mm   | patín mm | patín mm |
| 14 x 16    | 176        | 261.92 | 387     | 320     | 21.1 | 398      | 33.3     |
| 14 x 16    | 193        | 287.22 | 393     | 320     | 22.6 | 399      | 36.6     |
| 14 x 16    | 211        | 314.01 | 399     | 320     | 24.9 | 401      | 39.6     |
| 14 x 16    | 233        | 346.75 | 407     | 320     | 27.2 | 404      | 43.7     |
| 14 x 16    | 257        | 382.46 | 416     | 320     | 29.8 | 406      | 48.0     |
| 14 x 16    | 283        | 421.15 | 425     | 320     | 32.8 | 409      | 52.6     |
| 14 x 16    | 311        | 462.82 | 435     | 320     | 35.8 | 412      | 57.4     |
| 14 x 16    | 342        | 508.96 | 446     | 321     | 39.1 | 416      | 62.7     |
| 14 x 16    | 370        | 550.63 | 455     | 320     | 42.0 | 418      | 67.6     |
| 14 x 16    | 398        | 592.30 | 465     | 320     | 45.0 | 421      | 72.3     |
| 14 x 16    | 426        | 633.96 | 474     | 320     | 47.6 | 424      | 77.1     |
| 14 x 16    | 455        | 677.12 | 483     | 320     | 51.2 | 428      | 81.5     |
| 14 x 16    | 500        | 744.09 | 498     | 320     | 55.6 | 432      | 88.9     |
| 14 x 16    | 550        | 818.50 | 514     | 320     | 60.5 | 437      | 97.0     |
| 16 x 5 ½"  | 26         | 38.69  | 399     | 381     | 6.4  | 140      | 8.8      |
| 16 x 5 ½"  | 31         | 46.13  | 403     | 381     | 7.0  | 140      | 11.2     |
| 16 x 7     | 36         | 53.57  | 403     | 381     | 7.5  | 177      | 10.9     |
| 16 x 7     | 40         | 59.53  | 407     | 381     | 7.8  | 178      | 12.8     |
| 16 x 7     | 45         | 66.97  | 410     | 381     | 8.8  | 179      | 14.4     |
| 16 x 7     | 50         | 74.41  | 413     | 381     | 9.7  | 180      | 16.0     |
| 16 x 7     | 57         | 84.83  | 417     | 381     | 10.9 | 181      | 18.2     |
| 16 x 10 ¼" | 67         | 99.71  | 415     | 381     | 10.0 | 260      | 16.9     |
| 16 x 10 ¼" | 77         | 114.59 | 420     | 381     | 11.6 | 261      | 19.3     |
| 16 x 10 ¼" | 89         | 132.45 | 425     | 381     | 13.2 | 263      | 22.2     |
| 16 x 10 ¼" | 100        | 148.82 | 431     | 381     | 14.9 | 265      | 25.0     |
| 18 x 6     | 35         | 52.09  | 450     | 428     | 7.6  | 152      | 10.8     |
| 18 x 6     | 40         | 59.53  | 431     | 428     | 8.0  | 153      | 13.3     |
| 18 x 6     | 46         | 68.46  | 459     | 428     | 9.1  | 154      | 15.4     |
| 18 x 7 ½"  | 41         | 61.02  | 455     | 430     | 8.4  | 190      | 12.0     |
| 18 x 7 ½"  | 45         | 66.97  | 458     | 432     | 8.7  | 190      | 12.3     |
| 18 x 7 ½"  | 50         | 74.41  | 457     | 428     | 9.0  | 190      | 14.5     |
| 18 x 7 ½"  | 55         | 81.85  | 460     | 428     | 9.9  | 191      | 16.0     |

## VIGA I.P.R.

| Dimensión  | Peso aprox |        | Peralte | Peralte | Alma | Ancho    | Espesor  |
|------------|------------|--------|---------|---------|------|----------|----------|
| Pulgadas   | lb / ft    | kg / m | ext. mm | int. mm | mm   | patín mm | patín mm |
| 18 x 7 ½"  | 60         | 89.29  | 463     | 428     | 10.5 | 192      | 17.7     |
| 18 x 7 ½"  | 65         | 96.73  | 466     | 428     | 11.4 | 193      | 19.1     |
| 18 x 7 ½"  | 71         | 105.66 | 469     | 428     | 12.6 | 194      | 20.6     |
| 18 x 11    | 76         | 113.10 | 463     | 428     | 10.8 | 280      | 17.3     |
| 18 x 11    | 86         | 127.98 | 467     | 428     | 12.2 | 282      | 19.6     |
| 18 x 11    | 97         | 144.35 | 472     | 428     | 13.6 | 283      | 22.1     |
| 18 x 11    | 106        | 157.75 | 476     | 428     | 15.0 | 284      | 23.9     |
| 18 x 11    | 119        | 177.09 | 482     | 428     | 16.6 | 286      | 26.9     |
| 18 x 11    | 130        | 193.46 | 489     | 428     | 17.0 | 283      | 30.5     |
| 18 x 11    | 143        | 212.81 | 495     | 428     | 18.5 | 285      | 33.5     |
| 18 x 11    | 158        | 235.13 | 501     | 428     | 20.6 | 287      | 36.6     |
| 18 x 11    | 175        | 260.43 | 509     | 428     | 22.6 | 289      | 40.4     |
| 18 x 11    | 192        | 285.73 | 519     | 428     | 22.8 | 293      | 45.0     |
| 18 x 11    | 211        | 314.01 | 525     | 428     | 27   | 293      | 48.5     |
| 18 x 11    | 234        | 348.23 | 535     | 428     | 29   | 296      | 53.5     |
| 18 x 11    | 258        | 383.95 | 545     | 428     | 32   | 299      | 58.4     |
| 18 x 11    | 283        | 421.15 | 555     | 428     | 35   | 302      | 63.5     |
| 18 x 11    | 311        | 462.82 | 567     | 428     | 38   | 305      | 69.5     |
| 21 x 6 ½"  | 44         | 65.48  | 525     | 502     | 8.9  | 165      | 11.4     |
| 21 x 6 ½"  | 50         | 74.40  | 529     | 502     | 9.7  | 166      | 13.6     |
| 21 x 6 ½"  | 57         | 84.83  | 535     | 502     | 10.3 | 166      | 16.5     |
| 21 x 8 ¼"  | 48         | 71.40  | 524     | 500     | 8.9  | 207      | 11.0     |
| 21 x 8 ¼"  | 55         | 81.85  | 528     | 501     | 9.7  | 209      | 13.3     |
| 21 x 8 ¼"  | 62         | 92.30  | 533     | 502     | 10.2 | 209      | 15.6     |
| 21 x 8 ¼"  | 68         | 101.20 | 537     | 502     | 10.9 | 210      | 17.7     |
| 21 x 8 ¼"  | 73         | 108.64 | 539     | 501     | 11.6 | 211      | 18.8     |
| 21 x 8 ¼"  | 83         | 123.52 | 544     | 502     | 13.1 | 212      | 21.2     |
| 21 x 8 ¼"  | 93         | 138.40 | 549     | 502     | 14.7 | 214      | 23.6     |
| 21 x 12 ¼" | 101        | 150.31 | 543     | 502     | 12.7 | 312      | 20.3     |
| 21 x 12 ¼" | 111        | 165.19 | 546     | 502     | 14.0 | 313      | 22.2     |
| 21 x 12 ¼" | 122        | 181.56 | 551     | 502     | 15.2 | 315      | 24.4     |
| 21 x 12 ¼" | 132        | 196.44 | 554     | 501     | 16.5 | 316      | 26.3     |

## VIGA I.P.R.

| Dimensión  | Peso aprox |        | Peralte | Peralte | Alma | Ancho    | Espesor  |
|------------|------------|--------|---------|---------|------|----------|----------|
| Pulgadas   | lb / ft    | kg / m | ext. mm | int. mm | mm   | patín mm | patín mm |
| 21 x 12 ¼" | 147        | 218.76 | 560     | 502     | 18.3 | 318      | 29.2     |
| 21 x 12 ¼" | 166        | 247.04 | 571     | 502     | 19.0 | 315      | 34.5     |
| 21 x 12 ¼" | 182        | 270.85 | 577     | 502     | 21.1 | 318      | 37.6     |
| 21 x 12 ¼" | 201        | 299.12 | 585     | 502     | 23.1 | 319      | 41.4     |
| 21 x 12 ¼" | 223        | 331.86 | 593     | 502     | 25.4 | 322      | 45.4     |
| 21 x 12 ¼" | 248        | 369.07 | 603     | 502     | 27.9 | 324      | 50.5     |
| 21 x 12 ¼" | 275        | 409.25 | 613     | 502     | 30.9 | 327      | 55.6     |
| 24 x 7     | 55         | 81.80  | 599     | 573     | 10.0 | 178      | 12.8     |
| 24 x 7     | 62         | 92.27  | 603     | 573     | 10.9 | 179      | 15.0     |
| 24 x 9     | 56         | 83.34  | 599     | 573     | 9.0  | 228      | 13.0     |
| 24 x 9     | 61         | 90.78  | 598     | 573     | 9.6  | 227      | 12.7     |
| 24 x 9     | 68         | 101.20 | 603     | 573     | 10.5 | 228      | 14.9     |
| 24 x 9     | 76         | 113.00 | 608     | 573     | 11.2 | 228      | 17.3     |
| 24 x 9     | 84         | 125.00 | 612     | 573     | 11.9 | 229      | 19.6     |
| 24 x 9     | 94         | 139.89 | 617     | 573     | 13.1 | 230      | 22.2     |
| 24 x 9     | 103        | 153.28 | 623     | 573     | 14.0 | 229      | 24.9     |
| 24 x 12 ¾" | 104        | 154.77 | 611     | 573     | 12.7 | 324      | 19.0     |
| 24 x 12 ¾" | 117        | 174.12 | 616     | 573     | 14.0 | 325      | 21.6     |
| 24 x 12 ¾" | 131        | 194.95 | 622     | 573     | 15.4 | 327      | 24.4     |
| 24 x 12 ¾" | 146        | 217.27 | 628     | 573     | 16.5 | 328      | 27.7     |
| 24 x 12 ¾" | 162        | 241.09 | 635     | 573     | 17.9 | 329      | 31.1     |
| 24 x 12 ¾" | 176        | 261.92 | 641     | 573     | 19.0 | 327      | 34.0     |
| 24 x 12 ¾" | 192        | 285.73 | 647     | 573     | 20.6 | 329      | 37.1     |
| 24 x 12 ¾" | 207        | 308.05 | 660     | 573     | 22.0 | 333      | 39.0     |
| 24 x 12 ¾" | 229        | 340.79 | 661     | 573     | 24.4 | 333      | 43.9     |
| 24 x 12 ¾" | 250        | 372.05 | 670     | 573     | 26.6 | 335      | 47.5     |
| 24 x 12 ¾" | 279        | 415.20 | 679     | 573     | 29.5 | 338      | 53.1     |
| 24 x 12 ¾" | 306        | 455.38 | 689     | 573     | 32.0 | 340      | 57.9     |
| 24 x 12 ¾" | 335        | 498.54 | 699     | 573     | 35.1 | 343      | 63.0     |
| 24 x 12 ¾" | 370        | 550.63 | 711     | 573     | 38.6 | 347      | 69.1     |
| 27 x 10    | 84         | 125.01 | 678     | 645     | 11.7 | 253      | 16.3     |
| 27 x 10    | 94         | 139.89 | 684     | 646     | 12.4 | 254      | 18.9     |

## VIGA I.P.R.

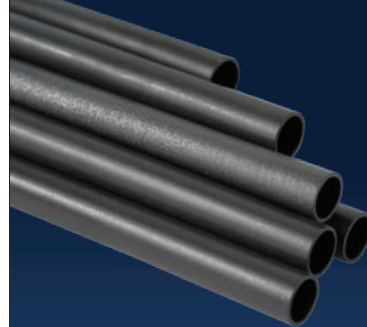
| Dimensión<br>Pulgadas | Peso aprox<br>lb / ft   kg / m | Peralte<br>ext. mm | Peralte<br>int. mm | Alma<br>mm | Ancho<br>patín mm | Espesor<br>patín mm |
|-----------------------|--------------------------------|--------------------|--------------------|------------|-------------------|---------------------|
| 27 x 10               | 102 151.79                     | 688                | 646                | 13.1       | 254               | 21.1                |
| 27 x 10               | 114 169.65                     | 693                | 646                | 14.5       | 256               | 23.6                |
| 27 x 10               | 129 191.98                     | 702                | 646                | 15.5       | 254               | 27.9                |
| 27 x 10               | 146 217.00                     | 686                | 602                | 23.2       | 254               | 41.7                |
| 27 x 14               | 146 217.27                     | 700                | 650                | 15.0       | 358               | 25.3                |
| 27 x 14               | 161 239.60                     | 701                | 646                | 16.7       | 356               | 27.4                |
| 27 x 14               | 178 264.90                     | 707                | 647                | 19.0       | 362               | 30.0                |
| 27 x 14               | 194 288.71                     | 716                | 645                | 19.0       | 358               | 33.0                |
| 27 x 14               | 217 322.94                     | 727                | 650                | 21.0       | 361               | 38.0                |
| 27 x 14               | 235 349.72                     | 728                | 647                | 23.0       | 362               | 41.0                |
| 27 x 14               | 258 383.95                     | 733                | 647                | 25.0       | 364               | 44.0                |
| 27 x 14               | 281 418.18                     | 745                | 648                | 28.0       | 365               | 49.0                |
| 27 x 14               | 307 456.87                     | 753                | 648                | 30.0       | 368               | 53.0                |
| 27 x 14               | 336 500.03                     | 762                | 649                | 32.0       | 370               | 57.0                |
| 27 x 14               | 368 547.65                     | 772                | 647                | 33.0       | 370               | 61.0                |
| 30 x 10 ½"            | 90 133.94                      | 750                | 716                | 11.9       | 264               | 15.5                |
| 30 x 10 ½"            | 99 147.33                      | 753                | 719                | 13.2       | 265               | 17.0                |
| 30 x 10 ½"            | 108 160.72                     | 758                | 719                | 13.8       | 266               | 19.3                |
| 30 x 10 ½"            | 116 172.63                     | 762                | 719                | 14.4       | 267               | 21.6                |
| 30 x 10 ½"            | 124 184.53                     | 766                | 719                | 14.9       | 267               | 21.6                |
| 30 x 10 ½"            | 132 196.44                     | 770                | 719                | 15.6       | 268               | 25.4                |
| 30 x 10 ½"            | 148 220.25                     | 779                | 719                | 16.5       | 266               | 30.0                |
| 30 x 15               | 173 257.46                     | 772                | 722                | 16.6       | 390               | 25.4                |
| 30 x 15               | 191 284.24                     | 784                | 722                | 18.0       | 384               | 29.1                |
| 30 x 15               | 211 314.01                     | 790                | 722                | 20.0       | 385               | 32.0                |
| 30 x 15               | 235 349.72                     | 796                | 722                | 24.0       | 385               | 36.0                |
| 30 x 15               | 261 388.41                     | 803                | 723                | 23.0       | 389               | 41.0                |
| 30 x 15               | 292 434.55                     | 803                | 720                | 25.0       | 385               | 46.0                |
| 30 x 15               | 326 485.15                     | 825                | 722                | 29.0       | 390               | 53.0                |
| 30 x 15               | 357 531.28                     | 831                | 723                | 31.0       | 388               | 54.0                |
| 30 x 15               | 391 581.88                     | 840                | 718                | 34.0       | 388               | 61.0                |
| 33 x 11 ½"            | 118 175.61                     | 835                | 797                | 14.0       | 292               | 18.8                |

## VIGA I.P.R.

| Dimensión<br>Pulgadas | Peso aprox<br>lb / ft   kg / m | Peralte<br>ext. mm | Peralte<br>int. mm | Alma<br>mm | Ancho<br>patín mm | Espesor<br>patín mm |
|-----------------------|--------------------------------|--------------------|--------------------|------------|-------------------|---------------------|
| 33 x 11 ½"            | 130 193.46                     | 840                | 797                | 14.7       | 292               | 21.7                |
| 33 x 11 ½"            | 141 209.83                     | 846                | 797                | 15.4       | 293               | 24.4                |
| 33 x 11 ½"            | 152 226.20                     | 851                | 797                | 16.1       | 294               | 26.8                |
| 33 x 11 ½"            | 169 251.50                     | 859                | 797                | 17.0       | 292               | 31.0                |
| 33 x 15 ¾"            | 201 299.12                     | 861                | 801                | 18.0       | 403               | 29.0                |
| 33 x 15 ¾"            | 221 328.89                     | 862                | 800                | 20.0       | 403               | 32.0                |
| 33 x 15 ¾"            | 241 358.65                     | 871                | 802                | 21.0       | 410               | 34.0                |
| 33 x 15 ¾"            | 263 391.39                     | 879                | 800                | 28.0       | 402               | 38.0                |
| 33 x 15 ¾"            | 291 433.06                     | 885                | 801                | 26.0       | 404               | 41.0                |
| 33 x 15 ¾"            | 318 473.24                     | 891                | 800                | 27.0       | 405               | 51.0                |
| 33 x 15 ¾"            | 354 526.82                     | 902                | 801                | 29.0       | 403               | 51.0                |
| 33 x 15 ¾"            | 387 575.93                     | 911                | 798                | 33.0       | 410               | 55.0                |
| 36 x 12               | 135 200.90                     | 903                | 863                | 15.2       | 304               | 20.1                |
| 36 x 12               | 150 223.23                     | 911                | 863                | 15.9       | 304               | 23.9                |
| 36 x 12               | 160 238.11                     | 915                | 863                | 16.5       | 305               | 25.9                |
| 36 x 12               | 170 252.99                     | 919                | 863                | 17.3       | 306               | 27.9                |
| 36 x 12               | 182 270.85                     | 923                | 863                | 18.4       | 307               | 30.0                |
| 36 x 12               | 194 288.71                     | 927                | 863                | 19.4       | 308               | 32.0                |
| 36 x 12               | 210 312.52                     | 932                | 863                | 21.1       | 309               | 34.5                |
| 36 x 12               | 232 345.26                     | 940                | 863                | 22.0       | 311               | 39.0                |
| 36 x 12               | 256 380.97                     | 948                | 863                | 23.0       | 313               | 43.0                |
| 36 x 16 ½"            | 231 343.77                     | 927                | 825                | 19.3       | 418               | 32.0                |
| 36 x 16 ½"            | 247 367.58                     | 931                | 824                | 20.3       | 419               | 34.3                |
| 36 x 16 ½"            | 262 389.90                     | 936                | 824                | 21.3       | 420               | 36.6                |
| 36 x 16 ½"            | 282 419.67                     | 943                | 825                | 22.5       | 422               | 39.9                |
| 36 x 16 ½"            | 302 449.43                     | 948                | 825                | 24.0       | 423               | 42.7                |
| 36 x 16 ½"            | 330 491.10                     | 957                | 825                | 25.9       | 422               | 47.0                |
| 36 x 16 ½"            | 359 534.00                     | 954                | 844                | 28.0       | 423               | 52.0                |
| 36 x 16 ½"            | 361 537.23                     | 965                | 825                | 28.4       | 425               | 51.1                |
| 36 x 16 ½"            | 395 587.83                     | 976                | 825                | 31.0       | 427               | 55.9                |
| 36 x 16 ½"            | 441 656.29                     | 987                | 825                | 34.5       | 431               | 62.0                |
| 36 x 16 ½"            | 487 724.74                     | 999                | 825                | 38.1       | 434               | 68.1                |

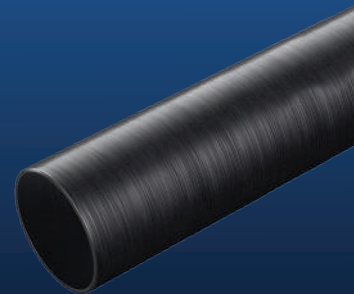
## VIGA I.P.R.

| Dimensión<br>Pulgadas | Peso aprox<br>lb / ft   kg / m | Peralte<br>ext. mm | Peralte<br>int. mm | Alma<br>mm | Ancho<br>patín mm | Espesor<br>patín mm |
|-----------------------|--------------------------------|--------------------|--------------------|------------|-------------------|---------------------|
| 36 x 16 ½"            | 529 787.25                     | 1011               | 825                | 40.9       | 437               | 73.9                |
| 36 x 16 ½"            | 652 970.29                     | 1043               | 825                | 50.0       | 446               | 89.9                |
| 40 x 12               | 149 221.74                     | 970                | 928                | 16.0       | 300               | 21.1                |
| 40 x 12               | 167 248.53                     | 980                | 928                | 16.5       | 300               | 26.0                |
| 40 x 12               | 183 272.34                     | 990                | 928                | 16.5       | 300               | 31.0                |
| 40 x 12               | 211 314.01                     | 1000               | 928                | 19.1       | 300               | 35.9                |
| 40 x 12               | 235 349.72                     | 1008               | 928                | 21.1       | 302               | 40.0                |
| 40 x 12               | 264 392.88                     | 1016               | 928                | 24.4       | 303               | 43.9                |
| 40 x 12               | 278 413.71                     | 1020               | 928                | 26.0       | 304               | 46.0                |
| 40 x 12               | 294 437.52                     | 1026               | 928                | 27.0       | 305               | 49.0                |
| 40 x 12               | 327 486.63                     | 1036               | 928                | 29.9       | 308               | 54.1                |
| 40 x 12               | 331 492.59                     | 1036               | 928                | 31.0       | 309               | 54.0                |
| 40 x 12               | 392 583.37                     | 1056               | 928                | 36.0       | 314               | 64.0                |
| 40 x 16               | 199 296.15                     | 982                | 928                | 16.5       | 400               | 27.1                |
| 40 x 16               | 215 319.96                     | 990                | 928                | 16.5       | 400               | 31.0                |
| 40 x 16               | 249 370.56                     | 1000               | 928                | 19.0       | 400               | 36.1                |
| 40 x 16               | 277 412.23                     | 1008               | 928                | 21.1       | 402               | 40.0                |
| 40 x 16               | 297 441.99                     | 1012               | 928                | 23.6       | 402               | 41.9                |
| 40 x 16               | 324 482.17                     | 1020               | 928                | 25.4       | 404               | 46.0                |
| 40 x 16               | 362 538.72                     | 1030               | 928                | 28.4       | 407               | 51.1                |
| 40 x 16               | 372 553.60                     | 1032               | 928                | 29.5       | 408               | 52.0                |
| 40 x 16               | 397 590.81                     | 1040               | 928                | 31.0       | 409               | 55.9                |
| 40 x 16               | 431 641.41                     | 1048               | 928                | 34.0       | 412               | 60.0                |
| 40 x 16               | 503 748.55                     | 1068               | 928                | 39.0       | 417               | 70.0                |
| 40 x 16               | 593 882.49                     | 1092               | 928                | 45.5       | 424               | 82.0                |
| 44 x 16               | 230 342.28                     | 1090               | 1028               | 18.0       | 400               | 31.0                |
| 44 x 16               | 262 389.90                     | 1100               | 1028               | 20.0       | 400               | 36.0                |
| 44 x 16               | 290 431.57                     | 1108               | 1028               | 22.0       | 402               | 40.0                |
| 44 x 16               | 335 498.54                     | 1118               | 1028               | 26.0       | 405               | 45.0                |



# TUBERÍA C30, C40 Y ESTRUCTURAL

[www.ferrebarniedo.com.mx](http://www.ferrebarniedo.com.mx)



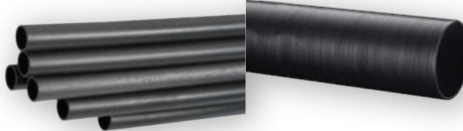
**FERRE BARNIEDO**

En acero...todo



## TUBERÍA

### CÉDULA 30 (6 m)



| Diámetro nominal |       | Calibre | Diámetro exterior | Espesor | Peso aprox | Piezas |
|------------------|-------|---------|-------------------|---------|------------|--------|
| Pulg.            | mm    |         |                   |         |            |        |
| 1/2"             | 12.7  | 14      | 21.34             | 1.90    | 5.76       | 127    |
| 3/4"             | 19.1  | 14      | 26.67             | 1.90    | 6.78       | 127    |
| 1"               | 25.4  | 14      | 33.40             | 1.90    | 9.00       | 91     |
| 1 1/4"           | 31.7  | 13      | 42.16             | 2.28    | 14.10      | 91     |
| 1 1/2"           | 38.1  | 13      | 48.26             | 2.28    | 16.20      | 61     |
| 2"               | 50.8  | 12      | 60.33             | 2.66    | 23.70      | 37     |
| 2 1/2"           | 63.5  | 12      | 73.03             | 2.66    | 27.78      | 37     |
| 3"               | 76.2  | 11      | 88.90             | 3.04    | 40.20      | 24     |
| 4"               | 101.6 | 11      | 114.30            | 3.04    | 52.20      | 24     |



## TUBERÍA

### CÉDULA 40 (6 m)

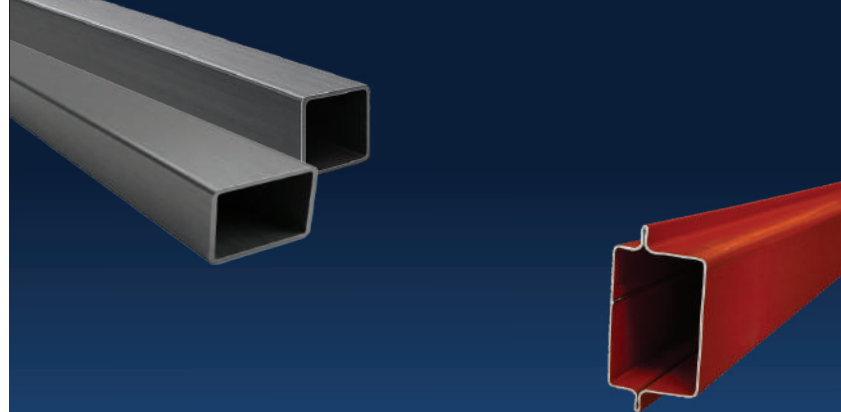
| Diámetro nominal |       | Diámetro exterior | Espesor | Peso aprox | Piezas |
|------------------|-------|-------------------|---------|------------|--------|
| Pulg.            | mm    |                   |         |            |        |
| 1/2"             | 12.7  | 21.34             | 2.77    | 7.25       | 127    |
| 3/4"             | 19.1  | 26.67             | 2.87    | 10.14      | 91     |
| 1"               | 25.4  | 33.40             | 3.38    | 15.01      | 61     |
| 1 1/4"           | 31.7  | 42.16             | 3.56    | 20.33      | 51     |
| 1 1/2"           | 38.1  | 48.26             | 3.68    | 24.29      | 44     |
| 2"               | 50.8  | 60.33             | 3.91    | 32.63      | 37     |
| 2 1/2"           | 63.5  | 73.03             | 5.16    | 51.77      | 19     |
| 3"               | 76.2  | 88.90             | 5.49    | 67.76      | 13     |
| 4"               | 101.6 | 114.30            | 6.02    | 96.38      | 10     |

## TUBERÍA

### ESTRUCTURAL

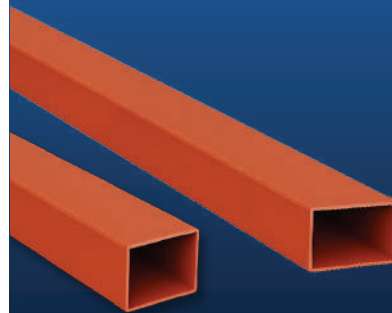
| Diámetro nominal |         | Ext. mm | Fracc. Pulg. | Milésima Pulg. | mm    | Cédula | Peso aprox |        |
|------------------|---------|---------|--------------|----------------|-------|--------|------------|--------|
| Pulg.            | mm      |         |              |                |       |        | lb / ft    | kg / m |
| 6"               | 6 5/8"  | 168.3   | 3/16"        | 0.188          | 4.78  |        | 12.95      | 19.27  |
|                  |         |         | 7/32"        | 0.219          | 5.56  |        | 15.00      | 22.31  |
|                  |         |         | 1/4"         | 0.250          | 6.35  |        | 17.04      | 25.36  |
|                  |         |         | 9/32"        | 0.280          | 7.11  | 40     | 18.99      | 28.26  |
|                  |         |         | 5/16"        | 0.312          | 7.92  |        | 21.00      | 31.25  |
|                  |         |         | 3/8"         | 0.375          | 9.53  |        | 25.00      | 37.20  |
|                  |         |         | 7/16"        | 0.432          | 10.97 | 80     | 28.59      | 42.56  |
| 8"               | 8 5/8"  | 219.1   | 3/16"        | 0.188          | 4.78  |        | 17.05      | 25.37  |
|                  |         |         | 7/32"        | 0.219          | 5.56  |        | 19.81      | 29.48  |
|                  |         |         | 1/4"         | 0.250          | 6.35  | 20     | 22.37      | 33.30  |
|                  |         |         |              | 0.277          | 7.04  | 30     | 24.39      | 36.30  |
|                  |         |         | 5/16"        | 0.312          | 7.92  |        | 27.65      | 41.14  |
|                  |         |         |              | 0.322          | 8.18  | 40     | 28.59      | 42.55  |
|                  |         |         | 3/8"         | 0.375          | 9.53  |        | 33.00      | 49.10  |
| 10"              | 10 3/4" | 273.1   | 1/2"         | 0.500          | 12.70 | 80     | 43.43      | 64.64  |
|                  |         |         | 3/16"        | 0.188          | 4.78  |        | 21.23      | 31.59  |
|                  |         |         |              | 0.203          | 5.16  |        | 22.89      | 34.06  |
|                  |         |         | 7/32"        | 0.219          | 5.56  |        | 24.65      | 36.69  |
|                  |         |         | 1/4"         | 0.250          | 6.35  | 20     | 28.06      | 41.76  |
|                  |         |         |              | 0.279          | 7.09  |        | 31.21      | 46.46  |
|                  |         |         |              | 0.307          | 7.80  | 30     | 34.27      | 51.00  |
| 12"              | 12 3/4" | 323.9   |              | 0.344          | 8.74  |        | 38.27      | 56.94  |
|                  |         |         |              | 0.365          | 9.27  | 40     | 40.52      | 60.30  |
|                  |         |         | 3/8"         | 0.375          | 9.53  |        | 41.59      | 61.89  |
|                  |         |         | 1/2"         | 0.500          | 12.70 | 60     | 54.79      | 81.53  |
|                  |         |         | 7/32"        | 0.219          | 5.56  |        | 29.34      | 43.66  |
|                  |         |         | 1/4"         | 0.250          | 6.35  | 20     | 33.39      | 49.71  |
|                  |         |         |              | 0.281          | 7.14  |        | 37.46      | 55.74  |
| 12"              | 12 3/4" | 323.9   | 5/16"        | 0.312          | 7.92  |        | 41.49      | 61.74  |

| Diámetro<br>nominal Pulg. |       | Ext.<br>mm | Fracc.<br>Pulg. | Milésima<br>Pulg. mm |       | Cédula   | Peso aprox<br>lb / ft kg / m |        |
|---------------------------|-------|------------|-----------------|----------------------|-------|----------|------------------------------|--------|
| 12"                       | 12 ¾" | 323.9      |                 | 0.330                | 8.38  | 30       | 43.81                        | 65.20  |
|                           |       |            |                 | 0.344                | 8.74  |          | 45.61                        | 67.89  |
|                           |       |            | 3/8"            | 0.375                | 9.53  |          | 49.59                        | 73.81  |
|                           |       |            | 2"              | 0.406                | 10.31 | 40       | 53.56                        | 79.71  |
|                           |       |            |                 | 0.438                | 11.13 |          | 57.64                        | 85.78  |
| 14"                       | 14"   | 355.6      | 1/2"            | 0.500                | 12.70 |          | 65.46                        | 97.43  |
|                           |       |            |                 | 0.219                | 5.56  |          | 32.25                        | 48.00  |
|                           |       |            | 1/4"            | 0.250                | 6.35  | 10       | 36.74                        | 54.68  |
|                           |       |            | 5/16"           | 0.312                | 7.92  | 20       | 45.65                        | 67.94  |
|                           |       |            |                 | 0.344                | 8.74  |          | 50.21                        | 74.73  |
|                           |       |            | 3/8"            | 0.375                | 9.53  | 30       | 54.61                        | 81.28  |
|                           |       |            |                 | 0.438                | 11.13 | 40       | 63.49                        | 94.49  |
|                           |       |            |                 | 0.469                | 11.91 |          | 67.83                        | 100.95 |
| 16"                       | 16"   | 406.4      | 1/2"            | 0.500                | 12.70 |          | 72.15                        | 107.38 |
|                           |       |            | 7/32"           | 0.219                | 5.56  |          | 36.94                        | 54.98  |
|                           |       |            | 1/4"            | 0.250                | 6.35  | 10       | 42.09                        | 62.64  |
|                           |       |            |                 | 0.281                | 7.14  |          | 47.21                        | 70.26  |
|                           |       |            | 5/16"           | 0.312                | 7.92  | 20       | 52.31                        | 77.86  |
|                           |       |            | 3/8"            | 0.375                | 9.53  | 30       | 62.62                        | 93.20  |
|                           |       |            |                 | 0.438                | 11.13 |          | 72.86                        | 108.43 |
|                           |       |            |                 | 0.469                | 11.91 |          | 77.85                        | 115.87 |
| 18"                       | 18"   | 457.2      | 1/2"            | 0.500                | 12.70 | 40       | 82.83                        | 123.28 |
|                           |       |            | 1/4"            | 0.250                | 6.35  | 10       | 47.43                        | 70.59  |
|                           |       |            | 3/8"            | 0.375                | 9.53  |          | 70.64                        | 105.14 |
|                           |       |            | 1/2"            | 0.500                | 12.70 |          | 93.52                        | 139.19 |
| 20"                       | 20"   | 508.0      | 1/4"            | 0.250                | 6.35  | 10       | 52.77                        | 78.54  |
|                           |       |            | 3/8"            | 0.375                | 9.53  | 20       | 78.66                        | 117.07 |
|                           |       |            | 1/2"            | 0.500                | 12.70 | 30       | 104.22                       | 155.10 |
| 24"                       | 24"   | 609.6      | 1/4"            | 0.250                | 6.35  | 10       | 63.46                        | 94.45  |
|                           |       |            | 3/8"            | 0.375                | 9.53  | 20       | 94.69                        | 140.93 |
|                           |       |            | 1/2"            | 0.500                | 12.70 | ext.fte. | 125.58                       | 186.90 |



# PERFILES

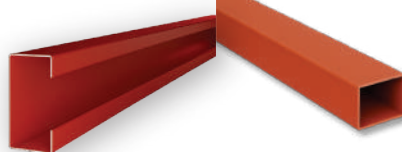
[www.ferrebarniedo.com.mx](http://www.ferrebarniedo.com.mx)



**FERRE BARNIEDO**

En acero...todo



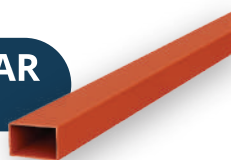


| Medidas<br>Pulgada    | Calibre | Peso aprox<br>kg / pza | Piezas<br>x atado |
|-----------------------|---------|------------------------|-------------------|
| 3" patin 1 ½" x 6 m   | 14      | 14.40                  | 70                |
| 4" patin 2" x 4 m     | 14      | 13.10                  | 70                |
| 4" patin 2" x 5 m     | 14      | 16.40                  | 70                |
| 4" patin 2" x 6 m     | 14      | 19.70                  | 70                |
| 4" patin 2" x 6 m     | 12      | 27.10                  | 70                |
| 4" patin 2" x 6 m     | 10      | 34.50                  | 70                |
| 5" patin 2" x 5 m     | 14      | 18.40                  | 48                |
| 5" patin 2" x 6 m     | 14      | 22.10                  | 48                |
| 5" patin 2" x 5 m     | 12      | 25.50                  | 48                |
| 5" patin 2" x 6 m     | 12      | 30.30                  | 48                |
| 5" patin 2" x 5 m     | 10      | 32.42                  | 48                |
| 5" patin 2" x 6 m     | 10      | 38.90                  | 48                |
| 6" patin 2" x 6 m     | 14      | 24.40                  | 64                |
| 6" patin 2" x 6 m     | 12      | 33.50                  | 64                |
| 6" patin 2" x 6 m     | 10      | 42.70                  | 64                |
| 8" patin 2 ¾" x 6 m   | 14      | 32.20                  | 30                |
| 8" patin 2 ¾" x 8 m   | 14      | 43.00                  | 30                |
| 8" patin 2 ¾" x 8 m   | 12      | 59.10                  | 30                |
| 8" patin 2 ¾" x 6 m   | 10      | 56.70                  | 30                |
| 8" patin 2 ¾" x 8 m   | 10      | 75.70                  | 30                |
| 10" patin 2 ¾" x 10 m | 14      | 61.10                  | 20                |
| 10" patin 2 ¾" x 10 m | 12      | 84.60                  | 20                |
| 10" patin 2 ¾" x 10 m | 10      | 108.30                 | 20                |
| 12" patin 3 ½" x 12 m | 14      | 89.82                  | 20                |
| 12" patin 3 ½" x 12 m | 12      | 124.50                 | 20                |
| 12" patin 3 ½" x 12 m | 10      | 159.60                 | 20                |

| Medidas     |         | R. Pytsa | Ternium | Calibre | Peso     | Piezas  |
|-------------|---------|----------|---------|---------|----------|---------|
| Pulg.       | mm      | Pintado  | Zintro  |         | kg / pza | x atado |
| ½" x ½"     | 13 x 13 | TP212    |         | 18      | 2.90     | 100     |
| ¾" x ¾"     | 19 x 19 | TP210    |         | 18      | 4.25     | 100     |
|             |         | TP210    |         | 20      | 3.20     | 100     |
|             |         |          | ZC075   | 18      | 4.30     | 100     |
|             |         |          | ZC075   | 20      | 3.28     | 100     |
| 1" x 1"     | 25 x 25 | TP121    |         | 18      | 5.65     | 100     |
|             |         | TP121    |         | 20      | 4.30     | 100     |
|             |         |          | ZC100   | 14      | 8.68     | 120     |
|             |         |          | ZC100   | 16      | 7.04     | 100     |
|             |         |          | ZC100   | 18      | 5.70     | 100     |
| 1 ¼" x 1 ¼" | 32 x 32 |          | ZC100   | 20      | 4.34     | 100     |
|             |         | TP208    |         | 18      | 7.20     | 100     |
|             |         | TP208    |         | 20      | 5.40     | 100     |
|             |         |          | ZC125   | 14      | 11.24    | 100     |
|             |         |          | ZC125   | 18      | 7.35     | 100     |
| 1 ½" x 1 ½" | 38 x 38 |          | ZC125   | 20      | 5.58     | 100     |
|             |         | TP207    |         | 18      | 8.75     | 100     |
|             |         | TP207    |         | 20      | 6.60     | 100     |
|             |         |          | ZC150   | 14      | 13.41    | 100     |
|             |         |          | ZC150   | 18      | 8.74     | 100     |
| 2" x 2"     | 51 x 51 |          | ZC150   | 20      | 6.64     | 100     |
|             |         | TP307    |         | 18      | 11.60    | 56      |
|             |         |          | ZC200   | 14      | 17.77    | 56      |
|             |         |          | ZC200   | 18      | 11.55    | 56      |

# PERFIL TUBULAR RECTANGULAR

## PINTADO Y ZINTRO



| Medidas   |         | R. Pytsa | Ternium | Calibre | Peso     | Piezas  |
|-----------|---------|----------|---------|---------|----------|---------|
| Pulg.     | mm      | Pintado  | Zintro  |         | kg / pza | x atado |
| 1" x ½"   | 25 x 13 | TP215    |         | 18      | 4.25     | 100     |
|           |         | TP215    |         | 20      | 3.20     | 100     |
|           |         |          | ZR100   | 18      | 4.30     | 100     |
| 1 ¼" x ¾" | 32 x 19 | TP228    |         | 18      | 5.65     | 100     |
|           |         | TP228    |         | 20      | 4.30     | 100     |
|           |         |          | ZR125   | 18      | 5.93     | 100     |
|           |         |          | ZR125   | 20      | 4.52     | 100     |
| 1 ½" x ½" | 38 x 13 | TP128    |         | 18      | 5.65     | 100     |
| 1 ½" x 1" | 38 x 25 | TP229    |         | 18      | 7.20     | 100     |
|           |         | TP229    |         | 20      | 5.40     | 100     |
| 1 ¾" x ¾" | 45 x 19 | TP230    |         | 18      | 7.20     | 100     |
|           |         | TP230    |         | 20      | 5.40     | 100     |
|           |         |          | ZR175   | 18      | 7.46     | 100     |
|           |         |          | ZR175   | 20      | 5.67     | 100     |
| 2 ¼" x ¾" | 57 x 19 | TP209    |         | 18      | 8.75     | 100     |
|           |         | TP209    |         | 20      | 6.60     | 100     |
|           |         |          | ZR225   | 20      | 6.82     | 100     |
| 2" x 1"   | 51 x 25 | TP216    |         | 18      | 8.75     | 100     |
|           |         | TP216    |         | 20      | 6.60     | 100     |
|           |         |          | ZR200   | 14      | 13.24    | 64      |
|           |         |          | ZR200   | 18      | 8.63     | 100     |
|           |         |          | ZR200   | 20      | 6.56     | 100     |

# PERFIL TUBULAR RECTANGULAR

## PINTADO Y ZINTRO

| Medidas     |          | R. Pytsa | Ternium | Calibre | Peso     | Piezas  |
|-------------|----------|----------|---------|---------|----------|---------|
| Pulg.       | mm       | Pintado  | Zintro  |         | kg / pza | x atado |
| 2 ½" x 1 ½" | 63 x 38  | TP368    |         | 18      | 11.26    | 50      |
|             |          | TP368    |         | 20      | 8.50     | 50      |
|             |          |          | ZR250   | 18      | 11.57    | 50      |
| 2 ½" x 1 ¼" | 63 x 32  | TP241    |         | 18      | 10.60    | 50      |
|             |          | TP241    |         | 20      | 8.00     | 50      |
|             |          |          | ZR249   | 18      | 11.20    | 50      |
|             |          |          | ZR249   | 20      | 8.50     | 50      |
| 3" x 1 ½"   | 75 x 38  | TP322    |         | 18      | 12.80    | 50      |
|             |          | TP322    |         | 20      | 9.60     | 50      |
|             |          |          | ZR300   | 14      | 20.14    | 50      |
|             |          |          | ZR300   | 18      | 12.60    | 50      |
|             |          |          | ZR300   | 20      | 9.61     | 50      |
|             |          |          | ZR300   | 22      | 7.95     | 50      |
| 4" x 1 ½"   | 102 x 38 | TP422    |         | 18      | 15.75    | 50      |
|             |          | TP422    |         | 20      | 11.85    | 50      |
|             |          |          | ZR400   | 14      | 23.68    | 50      |
|             |          |          | ZR400   | 18      | 15.52    | 50      |
|             |          |          | ZR400   | 20      | 11.81    | 50      |

## PERFIL TUBULAR CON CEJA

### PINTADO Y ZINTRO



| Medidas         |         | R. Pytsa Ternium |        | Cal. | Peso     | Piezas  |
|-----------------|---------|------------------|--------|------|----------|---------|
| Pulg.           | mm      | Pintado          | Zintro |      | kg / pza | x atado |
| 1 1/2" x 1 1/2" | 38 x 38 | TP234            |        | 18   | 9.90     | 100     |
|                 |         | TP234            |        | 20   | 7.50     | 100     |
|                 |         |                  | ZP150  | 18   | 9.63     | 100     |
|                 |         |                  | ZP150  | 20   | 7.31     | 100     |



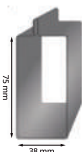
|             |         |       |       |    |       |    |
|-------------|---------|-------|-------|----|-------|----|
| 2" x 1 1/2" | 51 x 38 | TP261 |       | 18 | 10.95 | 50 |
|             |         | TP261 |       | 20 | 8.30  | 50 |
|             |         |       | ZP200 | 18 | 11.03 | 50 |
|             |         |       | ZP200 | 20 | 8.37  | 50 |



|                 |         |       |       |    |       |    |
|-----------------|---------|-------|-------|----|-------|----|
| 2 1/2" x 1 1/2" | 63 x 38 | TP268 |       | 18 | 12.35 | 50 |
|                 |         | TP268 |       | 20 | 9.30  | 50 |
|                 |         |       | ZP250 | 18 | 12.78 | 50 |
|                 |         |       | ZP250 | 20 | 9.69  | 50 |



|             |         |       |       |    |      |     |
|-------------|---------|-------|-------|----|------|-----|
| 1" x 1 1/2" | 25 x 38 | TP236 |       | 18 | 8.10 | 100 |
|             |         | TP236 |       | 20 | 6.10 | 100 |
|             |         |       | ZP100 | 18 | 8.12 | 100 |
|             |         |       | ZP100 | 20 | 6.16 | 100 |



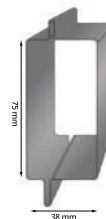
|             |         |       |       |    |       |    |
|-------------|---------|-------|-------|----|-------|----|
| 3" x 1 1/2" | 75 x 38 | TP310 |       | 18 | 13.95 | 50 |
|             |         | TP310 |       | 20 | 10.50 | 50 |
|             |         |       | ZP300 | 18 | 13.96 | 50 |
|             |         |       | ZP300 | 20 | 10.57 | 50 |



|             |          |       |       |    |       |    |
|-------------|----------|-------|-------|----|-------|----|
| 4" x 1 1/2" | 102 x 38 | TP410 |       | 18 | 16.90 | 50 |
|             |          | TP410 |       | 20 | 12.70 | 50 |
|             |          |       | ZP400 | 18 | 16.87 | 50 |



| Medida          |         | R. Pytsa Ternium |        | Cal. | Peso     | Piezas  |
|-----------------|---------|------------------|--------|------|----------|---------|
| Pulg.           | mm      | Pintado          | Zintro |      | kg / pza | x atado |
| 1 1/2" x 1 1/2" | 38 x 38 | TP235            |        | 18   | 11.26    | 60      |
|                 |         | TP235            |        | 20   | 8.50     | 60      |



| Medida      |         | R. Pytsa Ternium |        | Cal. | Peso     | Piezas  |
|-------------|---------|------------------|--------|------|----------|---------|
| Pulg.       | mm      | Pintado          | Zintro |      | kg / pza | x atado |
| 3" x 1 1/2" | 75 x 38 | TP239            |        | 18   | 15.18    | 50      |
|             |         |                  | ZP030  | 18   | 15.18    | 50      |
|             |         |                  | ZP030  | 20   | 11.40    | 50      |

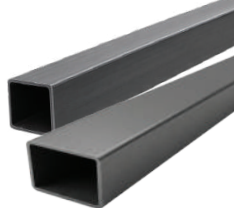


| Medida      |         | R. Pytsa Ternium |        | Cal. | Peso     | Piezas  |
|-------------|---------|------------------|--------|------|----------|---------|
| Pulg.       | mm      | Pintado          | Zintro |      | kg / pza | x atado |
| 2" x 1 1/2" | 50 x 38 | TP238            |        | 18   | 12.60    | 50      |
|             |         |                  | ZP020  | 20   | 9.79     | 50      |



| Medida |    | R. Pytsa Ternium |        | Cal. | Peso     | Piezas  |
|--------|----|------------------|--------|------|----------|---------|
| Pulg.  | mm | Pintado          | Zintro |      | kg / pza | x atado |
| 1"     | 25 | TP237            |        | 18   | 9.00     | 100     |
|        |    | TP237            |        | 20   | 7.00     | 100     |

# PERFIL TUBULAR P.T.R. RECTANGULAR Y CUADRADO



## Rectangular

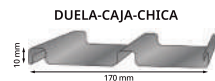
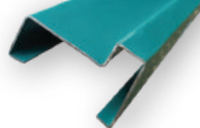
| Medidas     |              | Espesor<br>mm | Calibre | Color  | Peso aprox<br>kg / pza | Piezas<br>x atado |
|-------------|--------------|---------------|---------|--------|------------------------|-------------------|
| Pulg.       | mm           |               |         |        |                        |                   |
| 2" x 1"     | 50.8 x 25.4  | 1.89          |         | Ligero | 13.00                  | 64                |
| 2 ½" x 1 ¼" | 63.5 x 31.7  | 1.89          | 14      | Azul   | 15.85                  | 50                |
| 2 ½" x 1 ½" | 63.5 x 38.1  | 1.89          | 14      | Azul   | 18.00                  | 50                |
| 3" x 1 ½"   | 76.2 x 38.1  | 1.89          | 14      | Azul   | 19.00                  | 50                |
| 3" x 2"     | 76.2 x 50.8  | 1.89          | 14      | Azul   | 22.14                  | 42                |
|             |              | 3.04          | 11      | Blanco | 34.92                  | 30                |
|             |              | 3.80          | 9       | Verde  | 42.78                  | 25                |
| 4" x 1 ½"   | 101.6 x 38.1 | 4.55          | 7       | Rojo   | 50.22                  | 20                |
|             |              | 1.89          | 14      | Azul   | 25.00                  | 50                |
|             |              | 3.04          | 11      | Blanco | 42.54                  | 25                |
| 4" x 2"     | 101.6 x 50.8 | 3.80          | 9       | Verde  | 52.32                  | 20                |
|             |              | 4.55          | 7       | Rojo   | 61.68                  | 18                |
|             |              | 1.89          | 14      | Azul   | 31.62                  | 36                |
| 4" x 3"     | 101.6 x 76.2 | 3.04          | 11      | Blanco | 50.04                  | 20                |
|             |              | 3.80          | 9       | Verde  | 61.68                  | 16                |
|             |              | 4.55          | 7       | Rojo   | 72.96                  | 16                |

## Cuadrado

| Medidas     |               | Espesor<br>mm | Calibre | Color  | Peso aprox<br>kg / pza | Piezas<br>x atado |
|-------------|---------------|---------------|---------|--------|------------------------|-------------------|
| Pulg.       | mm            |               |         |        |                        |                   |
| ¾" x ¾"     | 19.1 x 19.1   | 1.89          | 14      | Azul   | 6.56                   | 100               |
| 1" x 1"     | 25.4 x 25.4   | 1.89          | 14      | Azul   | 8.64                   | 120               |
|             |               | 2.66          | 12      | Verde  | 11.22                  | 100               |
|             |               | 3.42          | 10      | Rojo   | 13.62                  | 81                |
| 1 ¼" x 1 ¼" | 31.7 x 31.7   | 1.89          | 14      | Azul   | 10.68                  | 100               |
| 1 ½" x 1 ½" | 38.1 x 38.1   | 1.89          | 14      | Azul   | 13.08                  | 72                |
|             |               | 2.66          | 12      | Blanco | 17.76                  | 56                |
|             |               | 3.04          | 11      | Verde  | 19.98                  | 49                |
| 2" x 2"     | 50.8 x 50.8   | 3.80          | 9       | Rojo   | 24.12                  | 42                |
|             |               | 1.89          | 14      | Azul   | 17.70                  | 56                |
|             |               | 2.66          | 12      | Blanco | 24.30                  | 42                |
| 2 ½" x 2 ½" | 63.5 x 63.5   | 3.04          | 11      | Verde  | 27.30                  | 36                |
|             |               | 3.80          | 9       | Rojo   | 33.36                  | 30                |
|             |               | 1.89          | 14      | Azul   | 22.14                  | 42                |
| 3" x 3"     | 76.2 x 76.2   | 3.04          | 11      | Blanco | 34.92                  | 30                |
|             |               | 3.80          | 9       | Verde  | 42.78                  | 25                |
|             |               | 4.55          | 7       | Rojo   | 50.22                  | 20                |
| 3 ½" x 3 ½" | 88.9 x 88.9   | 1.89          | 14      | Azul   | 27.54                  | 36                |
|             |               | 3.04          | 11      | Blanco | 42.54                  | 25                |
|             |               | 3.80          | 9       | Verde  | 52.32                  | 20                |
| 4" x 4"     | 101.6 x 101.6 | 4.55          | 7       | Rojo   | 61.68                  | 16                |
|             |               | 1.89          | 14      | Azul   | 31.62                  | 36                |
|             |               | 3.04          | 11      | Blanco | 50.04                  | 20                |
| 4" x 4"     | 101.6 x 101.6 | 3.80          | 9       | Verde  | 61.68                  | 16                |
|             |               | 4.55          | 7       | Rojo   | 71.96                  | 16                |
|             |               | 1.89          | 14      | Azul   | 36.18                  | 30                |
| 4" x 4"     | 101.6 x 101.6 | 3.04          | 11      | Blanco | 57.60                  | 20                |
|             |               | 3.80          | 9       | Verde  | 72.18                  | 16                |
|             |               | 4.55          | 7       | Rojo   | 85.80                  | 16                |

# PERFIL TUBULAR

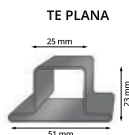
## VENTANA Y PUERTA



DUELA-CAJA-CHICA

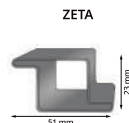
Medidas R. Pytsa Ternium Cal. Peso Piezas  
mm Pintado Zintro kg / pza x atado

|          |       |    |      |     |
|----------|-------|----|------|-----|
| 10 x 107 | TP132 | 20 | 9.55 | 100 |
|          | ZD170 | 20 | 9.50 | 100 |



TE PLANA

|              |       |    |      |     |
|--------------|-------|----|------|-----|
| 51 x 25 x 23 | TP219 | 18 | 8.75 | 100 |
|              | TP219 | 20 | 6.60 | 100 |
|              | ZV103 | 18 | 8.28 | 100 |
|              | ZV103 | 20 | 6.29 | 100 |



ZETA

|         |       |    |      |     |
|---------|-------|----|------|-----|
| 23 x 51 | TP233 | 18 | 8.75 | 100 |
|         | TP233 | 20 | 6.60 | 100 |
|         | ZV106 | 18 | 8.39 | 100 |
|         | ZV106 | 20 | 6.37 | 100 |

MEDIA-Z-ÁNGULO-LISO



|         |       |    |      |     |
|---------|-------|----|------|-----|
| 25 x 25 | TP201 | 18 | 7.50 | 100 |
|         | TP201 | 20 | 5.65 | 100 |
|         | ZV101 | 18 | 7.13 | 100 |
|         | ZV101 | 20 | 5.49 | 100 |

MEDIA-Z-ÁNGULO



|         |       |    |      |     |
|---------|-------|----|------|-----|
| 25 x 25 | TP205 | 18 | 8.55 | 100 |
|         | TP205 | 20 | 6.50 | 100 |
|         | ZV123 | 20 | 6.43 | 100 |

MOSQUITERO MARCO



|         |       |    |      |     |
|---------|-------|----|------|-----|
| 21 x 21 | TP101 | 20 | 3.70 | 100 |
|---------|-------|----|------|-----|

PASAMANOS



|         |        |    |      |     |
|---------|--------|----|------|-----|
| 62 x 12 | TP225  | 18 | 8.75 | 100 |
|         | TP225  | 20 | 6.60 | 100 |
|         | ZPM150 | 20 | 6.49 | 100 |

# PERFIL TUBULAR

## VENTANA Y PUERTA

Medidas R. Pytsa Ternium Cal. Peso Piezas  
mm Pintado Zintro kg / pza x atado

RIEL SUPERIOR



|         |       |    |      |     |
|---------|-------|----|------|-----|
| 35 x 30 | TP211 | 18 | 4.00 | 100 |
|         | ZV124 | 18 | 4.09 | 100 |

CANALETA



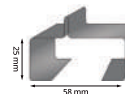
|         |       |    |      |      |
|---------|-------|----|------|------|
| 10 x 19 | TP117 | 20 | 1.50 | 1200 |
|         | ZV155 | 20 | 1.51 | 1200 |

VAGUETA



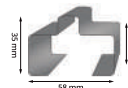
|         |       |    |      |      |
|---------|-------|----|------|------|
| 10 x 10 | TP114 | 18 | 1.50 | 2000 |
|         | TP114 | 20 | 1.10 | 2000 |
|         | ZV154 | 18 | 1.43 | 2000 |
|         | ZV154 | 20 | 1.11 | 2000 |

CHAMBRANA SENCILLA



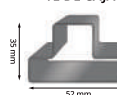
|         |       |    |      |     |
|---------|-------|----|------|-----|
| 25 x 58 | TP204 | 18 | 7.70 | 100 |
|         | TP204 | 20 | 5.80 | 100 |
|         | ZV121 | 18 | 8.02 | 100 |
|         | ZV121 | 20 | 6.15 | 100 |

MOSQUITERO MARCO



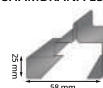
|              |       |    |      |     |
|--------------|-------|----|------|-----|
| 25 x 35 x 58 | TP104 | 18 | 7.70 | 100 |
|              | TP104 | 20 | 5.80 | 100 |
|              | ZV120 | 20 | 6.12 | 100 |

TE DE CAJA



|         |       |    |      |     |
|---------|-------|----|------|-----|
| 35 x 52 | TP224 | 20 | 7.00 | 100 |
|         | ZV144 | 20 | 6.90 | 100 |

CHAMBRANA ESCALONADA



|         |       |    |      |     |
|---------|-------|----|------|-----|
| 25 x 58 | TP206 | 18 | 7.70 | 100 |
|         | TP206 | 20 | 5.80 | 100 |

# PERFIL TUBULAR

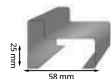
## VENTANA Y PUERTA



**TABLERO**  
PINTADO Y ZINTRO

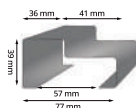
**Medidas** **R. Pytsa Ternium** **Cal.** **Peso** **Piezas**  
mm Pintado Zintro kg / pza x atado

### MARCO TOPE SENCILLO ESCALONADA



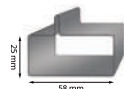
|         |       |    |      |     |
|---------|-------|----|------|-----|
| 25 x 58 | TP112 | 18 | 7.56 | 100 |
|         | TP112 | 20 | 5.70 | 100 |
|         | ZM225 | 18 | 7.29 | 100 |
|         | ZM225 | 20 | 5.65 | 100 |

### MARCO TOPE DOBLE ESCALONADA

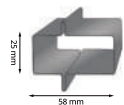


|         |       |    |      |     |
|---------|-------|----|------|-----|
| 39 x 77 | TP113 | 20 | 6.40 | 100 |
|---------|-------|----|------|-----|

### CHAMBRANA SENCILLA

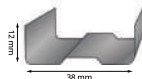


|         |       |    |       |    |
|---------|-------|----|-------|----|
| 25 x 58 | TP243 | 18 | 10.35 | 50 |
|         | TP243 | 20 | 7.80  | 50 |
|         | ZV126 | 18 | 10.28 | 50 |
|         | ZV126 | 20 | 7.81  | 50 |



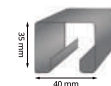
|         |       |    |       |    |
|---------|-------|----|-------|----|
| 25 x 58 | TP242 | 18 | 11.26 | 50 |
|         | TP242 | 20 | 8.50  | 50 |
|         | ZV127 | 20 | 8.88  | 50 |

### FALSO PLAFÓN



|         |       |    |      |     |
|---------|-------|----|------|-----|
| 12 x 38 | TP118 | 20 | 2.60 | 800 |
|---------|-------|----|------|-----|

### RIEL



|         |        |    |      |     |
|---------|--------|----|------|-----|
| 35 x 40 | TP127  | 18 | 7.40 | 100 |
|         | ZP1400 | 18 | 7.23 | 100 |

### RIEL



|         |        |    |       |    |
|---------|--------|----|-------|----|
| 62 x 46 | TP227  | 14 | 17.30 | 50 |
|         | TP227  | 16 | 14.50 | 50 |
|         | ZP1500 | 16 | 14.43 | 50 |

**Ancho** **Largo** **Calibre** **Peso aprox**  
Pies m Pies m kg / pza

|   |      |    |      |    |       |
|---|------|----|------|----|-------|
| 3 | 0.91 | 3  | 0.91 | 20 | 6.06  |
| 3 | 0.91 | 6  | 1.83 | 20 | 12.12 |
| 3 | 0.91 | 8  | 2.44 | 20 | 16.18 |
| 3 | 0.91 | 10 | 3.05 | 20 | 20.21 |
| 4 | 1.22 | 3  | 0.91 | 20 | 8.08  |
| 4 | 1.22 | 4  | 1.22 | 20 | 10.78 |
| 4 | 1.22 | 6  | 1.83 | 20 | 16.17 |
| 4 | 1.22 | 8  | 2.44 | 20 | 21.56 |
| 4 | 1.22 | 10 | 3.05 | 20 | 26.95 |
| 3 | 0.91 | 3  | 0.91 | 22 | 5.05  |
| 3 | 0.91 | 6  | 1.83 | 22 | 10.10 |
| 3 | 0.91 | 8  | 2.44 | 22 | 13.47 |
| 3 | 0.91 | 10 | 3.05 | 22 | 16.84 |
| 4 | 1.22 | 3  | 0.91 | 22 | 6.95  |
| 4 | 1.22 | 6  | 1.83 | 22 | 13.91 |
| 4 | 1.22 | 8  | 2.44 | 22 | 17.97 |
| 4 | 1.22 | 10 | 3.05 | 22 | 23.18 |

# CENTRO DE SERVICIOS

[www.ferrebarniedo.com.mx](http://www.ferrebarniedo.com.mx)



**FERRE BARNIEDO®**  
En acero...todo

## CENTRO DE CORTE

### CORTE

La alta calidad de los componentes de la maquinaria y la automatización completa del proceso nos permite ofrecer cortes con acabados de precisión absoluta. El corte se hace con sierra cinta.

Gracias al guiado del cabezal y el motor de cepillo, se logran piezas angulares con alta exactitud y limpieza, otorgando la confianza de obtener productos a la medida. La gran capacidad del panel de control eléctrico nos permite satisfacer las más amplias exigencias de los clientes.

Contamos con largos desde 20 hasta 40 pies evitando así desperdicios. Adicionalmente contamos con grúas de gran capacidad para cargar y descargar productos rápidamente, dando como resultado entregas "justo a tiempo" según requerimiento de los clientes.

#### Características técnicas de corte

Corte recto 90°: 1,200 x 450 mm (*ancho x alto*)

Corte ángulo 45°: 870 x 450 mm (*ancho x alto*)

Corte ángulo -45°: 820 x 450 mm (*ancho x alto*)

Corte ángulo -60°: 600 x 450 mm (*ancho x alto*)

Máximo ángulo de rotación: +45° (cuadrante IV)

Mínimo ángulo de rotación: -60° (cuadrante III)

## CORTE DE HOJA Y BLANKS CON CIZALLA

Consiste en obtener tiras y cuadros partiendo de hojas de lámina y placa obteniendo un acabado a escuadra.

#### Longitud hasta 20'

Capacidad de corte desde  $\frac{3}{16}$ " (0.1875" / 4.76 mm) hasta  $\frac{1}{2}$ " (0.50" / 12.70 mm)

#### Longitud hasta 10'

Capacidad de corte desde calibre 30 (0.0129" / 0.30 mm) hasta  $\frac{5}{8}$ " (0.625" / 15.875 mm)

Contamos con 5 cizallas para realizar cortes con la mayor precisión y tolerancia de encuadre hasta de 1 mm.



[www.ferrebarniedo.com.mx](http://www.ferrebarniedo.com.mx)

Ecatepec · Chalco · Monclova · Puebla · Querétaro · San Luis Potosí · Guadalajara | 48



# CENTRO DE GRANALLADO Y PINTADO

Línea con la más alta tecnología, que nos permite satisfacer las más exigentes especificaciones y necesidades de nuestros clientes, cuidando al medio ambiente. Dando de esta forma una ***solución integral a proyectos estructurales***, que nos posiciona como una empresa líder a la vanguardia.

La programación adecuada nos permite dar respuesta a tiempo a todas las necesidades de los clientes, ofreciendo perfiles estructurales listos para montar con la más alta calidad y acabados de primer nivel.

## GRANALLADO

Técnica de tratamiento de limpieza superficial por impacto a gran velocidad (65-100 m/s) o también llamado "chorreado abrasivo", en el cual se puede lograr un excelente grado de limpieza y una correcta terminación superficial, eliminando los contaminantes de la superficie, mejorando la adherencia de cualquier tipo de revestimiento o pintura, además de dar un excelente aspecto visual de la pieza.

### Perfiles que se pueden granallar y pintar

|               |          |
|---------------|----------|
| Ángulo        | Viga IPR |
| HSS           | Viga IPS |
| Placa en hoja | Canal    |
| Tubería       |          |

### Características técnicas

|                                    |
|------------------------------------|
| Boca de entrada: 2600 mm x 650 mm  |
| Placa espesor mínimo: 6 mm         |
| Placa ancho máximo: 2500 mm        |
| Perfiles máximos: 1128 mm x 454 mm |

En Ferre Barniedo, estamos comprometidos con nuestra misión de vender productos de la más alta calidad, por eso contamos con más del 90% de nuestro inventario (+ 200,000 tons) bajo techo, protegiéndolo así del intemperie y oxidación.

## PINTURA

Nuestro sistema de pintura completamente automatizado detecta lo alto, ancho y largo de la pieza para su perfecto pintado ofreciendo a nuestros clientes un acabado excelente. De esta manera contamos con un ahorro considerable de pintura y con el sistema de aspersión por medio de 4 boquillas que abarcan toda el área de la pieza a pintar, por medio de un brazo robotizado. El servicio que ofrecemos es pintura primaria o primera capa, con un espesor de 20 a 30 micras de pintura.

### Ahorro considerable de pintura y sistema de filtro para proteger el medio ambiente

#### Ventajas de granallar y pintar:

- Excelente aspecto visual de la pieza y acabado de pintura primaria.
- Mejora la calidad de soldadura, reduciendo el número de poros.
- Mejora la velocidad de soldadura en más de un 20%.
- Mejora la calidad de corte.
- Reduce el consumo de consumibles de corte.
- Sin impurezas ni grasa, una excelente terminación.
- Mejora la adherencia de cualquier revestimiento o pintura, por la calidad de la limpieza.
- Ahorro en tiempo y dinero.



# CORTE Y NIVELADO DE PRODUCTOS PLANOS

## NIVELACIÓN BLANKS Y CORTES DE HOJA

Nivelación de rollo a hoja, desde calibre 34" (0.0082" / 0.21 mm) hasta ¾" (0.750" / 19.05 mm).

## NIVELADORA

Consiste en ejercer presión a base de rodillos sobre la lámina en rollo, logrando planicidad total del material, para finalmente cortar al largo que se requiera.

Contamos con una de las niveladoras más grandes del mundo. Podemos nivelar y cortar material hasta de ¾" de espesor en un ancho de 8 pies (2440 mm) y hasta longitudes de 18 metros. Los materiales que procesamos en esta línea debido a su proceso de enderezado y nivelado logran niveles de planicidad extraordinarios; adicionalmente el material pierde la memoria, lo cual es muy conveniente en materiales que serán procesados en pantógrafos o cizallas. Esta línea procesa materiales A36, grado 50.

## CORTE DE ROLLO A CINTA (SLITTER)

Consiste en cortar lámina que viene en rollo a cintas de diferentes anchos y espesores, así como hacer desbaste sin realizar cortes.

Corte de rollo a cinta desde calibre 30 (0.120" / 0.30 mm) hasta ¾" (0.250" / 6.35 mm) en rollos de hasta 25 toneladas y con un ancho de hasta 72" (6 pies). La velocidad de corte es de 900 fpm o 275 m por minuto. Proporcionamos 1 equipo de slitter con nivelador integrado, lo cual permite dar una presentación excelente de la cinta y podemos atender las necesidades más exigentes.

## MULTIBLANKING

Equipo totalmente automatizado que permite habilitar en un solo proceso hojas, tiras y blanks cortados a la medida requerida, con excelente precisión y estricto control de las especificaciones solicitadas por nuestros clientes. De alta precisión y uno de los equipos más modernos de México, cuenta con la más alta tecnología para procesos de nivelación y corte de aceros planos.

Tiene la capacidad de nivelación y corte de lámina desde calibre 25 (0.0209" / 0.53 mm) hasta calibre 10 (0.1345" / 3.42 mm) acepta rollos hasta de 25 toneladas, en ancho de hasta 60" (1524 mm), ofreciendo hasta 144" (3658 mm) de longitud.

El proceso de corte inicia de manera longitudinal (slitter) y el corte final es transversal (cizalla). La velocidad de corte es de 295 fpm (9 m por minuto).



[www.ferrebarniedo.com.mx](http://www.ferrebarniedo.com.mx)

Ecatepec Chalco Monclova Puebla Oaxaca San Luis Potosí Guadalajara | 50



# CORTE DE PANTÓGRAFO

Consiste en hacer cortes sobre lámina o placa de figuras regulares o irregulares según lo requiera el cliente.

## PANTÓGRAFO PLASMA ALTA DEFINICIÓN

Corte de figuras regulares e irregulares con opción de biselado en caso de ser requerido, con la más alta tecnología que nos permite satisfacer las necesidades más exigentes de los clientes.

## CARACTERÍSTICAS TÉCNICAS BISEL - HASTA 38°

|                             |              |                                               |              |
|-----------------------------|--------------|-----------------------------------------------|--------------|
| Ancho de trabajo:           | 3.05 m (10") | Espesor máximo de corte comenzando por borde: | 64 mm (2 ½") |
| Longitud máxima de trabajo: | 24 m (80")   | Espesor máximo con perforación:               | 51 mm (2")   |

La correcta aplicación de la soldadura en estructuras depende directamente del corte a bisel.

## PANTÓGRAFO DE CONTROL NÚMERICO CON PLASMA Y OXICORTE:

|              | Capacidad oxicorte        | Capacidad plasma    | Pantógrafo oxicorte | Pantógrafo control óptico con oxicorte |
|--------------|---------------------------|---------------------|---------------------|----------------------------------------|
| Espesores    | Entre ⅜" hasta calibre 14 | Calibre 14 hasta ½" | Calibre 27 hasta ½" | Desde ⅜" hasta calibre 12              |
| Ancho máximo | 12'                       | 12'                 | 6'                  | 6'                                     |
| Longitud máx | 40'                       | 40'                 | 40'                 | 20'                                    |

## USOS MÁS COMUNES DEL PANTÓGRAFO:

- Estructura metálica
- Construcción
- Fabricación de bienes y equipos
- Recipientes metálicos
- Naval
- Carrocería
- Entre otros



# Tolerancia en espesor ASTM

A-6 · A-20 · A-635 · A-568 acero al carbón R.C. · Decapado · R.F.

| Cal. | Espesor | R.C.D | Tolerancia           | Cal. | Espesor | R.C.D | Tolerancia           |
|------|---------|-------|----------------------|------|---------|-------|----------------------|
|      | Pulg.   | mm    | R.C.S.D 36" 48" R.F. |      | Pulg.   | mm    | R.C.S.D 36" 48" R.F. |
| 3    | 0.2391  | 6.07  | 0.2471               | 12   | 0.1046  | 2.66  | 0.0976 0.0966 0.0986 |
|      |         |       | 0.2311               |      |         |       | 0.0967 0.0947        |
|      |         |       | 0.2322 0.2332        | 13   | 0.0897  | 2.28  | 0.0827 0.0847        |
| 4    | 0.2242  | 5.69  | 0.2162 0.2152        |      |         |       | 0.0817 0.0797        |
|      |         |       | 0.2172 0.2182        | 14   | 0.0747  | 1.9   | 0.0677 0.0697        |
| 5    | 0.2092  | 5.31  | 0.2012 0.2002        |      |         |       | 0.0733 0.0723        |
|      |         |       | 0.2023 0.2033        | 15   | 0.0673  | 1.71  | 0.0613 0.0623        |
| 6    | 0.1943  | 4.95  | 0.1863 0.1853        |      |         |       | 0.0745 0.0675        |
|      |         |       | 0.1955 0.1965        | ⅜"   | 0.0625  | 1.58  | 0.0505 0.0575        |
| ⅜"   | 0.1875  | 4.76  | 0.1795 0.1785        |      |         |       | 0.0658 0.0648        |
|      |         |       | 0.1863 0.1873        | 16   | 0.0598  | 1.52  | 0.0538 0.0548        |
| 7    | 0.1793  | 4.55  | 0.1723 0.1713        |      |         |       | 0.0588 0.0578        |
|      |         |       | 0.1714 0.1724        | 17   | 0.0538  | 1.93  | 0.0488 0.0498        |
| 8    | 0.1644  | 4.18  | 0.1574 0.1564        |      |         |       | 0.0528 0.0518        |
|      |         |       | 0.1565 0.1572        | 18   | 0.0478  | 1.21  | 0.0428 0.0438        |
| 9    | 0.1495  | 3.80  | 0.1425 0.1415        |      |         |       | 0.0458 0.0458        |
|      |         |       | 0.1415 0.1425 0.1405 | 19   | 0.0418  | 1.06  | 0.0378 0.0378        |
| 10   | 0.1345  | 3.42  | 0.1275 0.1265 0.1285 |      |         |       | 0.0389 0.0389        |
|      |         |       | 0.1320 0.1330 0.131  | 20   | 0.0359  | 0.91  | 0.0329 0.0329        |
| ⅝"   | 0.1250  | 3.17  | 0.1180 0.1170 0.119  |      |         |       | 0.0359 0.0359        |
|      |         |       | 0.1266 0.1276 0.1256 | 21   | 0.0329  | 0.84  | 0.0299 0.0299        |
| 11   | 0.1196  | 3.04  | 0.1126 0.1116 0.1136 |      |         |       | 0.0299 0.0299        |
|      |         |       | 0.1116 0.1126 0.1106 |      |         |       |                      |



# Tolerancia en espesor ASTM

A-6 · A-20 · A-635 · A-568 acero al carbón R.C. · Decapado · R.F.

| Cal.  | Espesor |      | Placa  | Tolerancia |                  | Cal.    | Espesor |       | Placa  | Tolerancia |                  |
|-------|---------|------|--------|------------|------------------|---------|---------|-------|--------|------------|------------------|
|       | Pulg.   | mm   |        | R.F.       | R.C.D<br>R.C.S.D |         | Pulg.   | mm    |        | R.F.       | R.C.D<br>R.C.S.D |
|       |         |      |        | 0.0342     |                  |         |         |       |        | 0.4050     | 0.3880           |
| 1/32" | 0.0312  | 0.79 |        | 0.0282     |                  | 3/8"    | 0.3750  | 9.52  | 0.3650 |            | 0.3620           |
|       |         |      |        | 0.0329     |                  |         |         |       |        | 0.4670     | 0.4515           |
| 22    | 0.0299  | 0.76 |        | 0.0269     |                  | 7/16"   | 0.4375  | 11.11 | 0.4270 |            | 0.4235           |
|       |         |      |        | 0.0299     |                  |         |         |       |        | 0.5300     | 0.5140           |
| 23    | 0.0269  | 0.68 |        | 0.0239     |                  | 1/2"    | 0.5000  | 12.7  | 0.4900 |            | 0.4860           |
|       |         |      |        | 0.0269     |                  |         |         |       |        | 0.5920     | 0.5775           |
| 24    | 0.0239  | 0.61 |        | 0.0209     |                  | 9/16"   | 0.5625  | 14.28 | 0.5220 |            | 0.5475           |
|       |         |      |        | 0.0239     |                  |         |         |       |        | 0.6550     | 0.6400           |
| 25    | 0.0209  | 0.53 |        | 0.0179     |                  | 5/8"    | 0.6250  | 15.87 | 0.6150 |            | 0.6100           |
|       |         |      |        | 0.0199     |                  |         |         |       |        | 0.7170     | 0.7035           |
| 26    | 0.0179  | 0.45 |        | 0.0159     |                  | 1 1/16" | 0.6875  | 17.46 | 0.6770 |            | 0.6715           |
|       |         |      |        | 0.0184     |                  |         |         |       |        | 0.7800     | 0.7660           |
| 27    | 0.0164  | 0.42 |        | 0.0144     |                  | 3/4"    | 0.7500  | 19.05 | 0.7400 |            | 0.7340           |
|       |         |      |        | 0.0169     |                  |         |         |       |        | 0.8420     | 0.8285           |
| 28    | 0.0149  | 0.38 |        | 0.0129     |                  | 1 3/16" | 0.8125  | 20.63 | 0.8020 |            | 0.7965           |
| 29    | 0.0135  | 0.34 |        |            |                  |         |         |       |        | 0.9050     | 0.8910           |
| 30    | 0.0120  | 0.3  |        |            |                  | 7/8"    | 0.8750  | 22.22 | 0.8650 |            | 0.8590           |
|       |         |      | 0.2800 |            | 0.2620           |         |         |       |        | 0.9670     | 0.9535           |
| 1/4"  | 0.2500  | 6.35 | 0.2400 |            | 0.2380           | 1 5/16" | 0.9375  | 23.81 | 0.9270 |            | 0.9215           |
|       |         |      |        | 0.3420     | 0.3245           |         |         |       |        | 1.0600     | 1.0160           |
| 5/16" | 0.3125  | 7.93 | 0.3020 |            | 0.3005           | 1       | 1.000   | 25.40 | 0.9900 |            | 0.9840           |

## FACTORES DE CONVERSIÓN

### Libras por pie:

Kilogramos por metro x 0.671957

### Kilogramos por metro:

Libras por pie x 1.48818

### 1 Kilogramo (kg):

2.2046 libras

### 1 Libra (lb):

0.453592 kilogramos

### 1 Pulgada (in):

25.4 milímetros

### 1 Pie (ft):

12 pulgadas

304.8 milímetros

### 1 Yarda:

3 pies

914.4 milímetros

### 1 metro:

3.2808 pies

1.0936 yardas

### Placa 5 x 20:

72.77 x espesor (mm) = kg / placa

### Placa 6 x 20:

87.66 x espesor (mm) = kg / placa

### Placa 8 x 20:

116.82 x espesor (mm) = kg / placa

**NOTA:** \*Todos los pesos en este catálogo son teóricos, basados en las especificaciones del fabricante, estos pueden tener variación.



# **FERRE BARNIEDO®**

En acero...todo

**Nuestra prioridad: el cliente**

**Calidad: la más alta**

**Servicio: el mejor**

**Surtido: el más amplio**

**En acero ... todo**



[www.ferrebarniedo.com.mx](http://www.ferrebarniedo.com.mx)

