

# ***CATÁLOGO*** **ENGRANAJES**

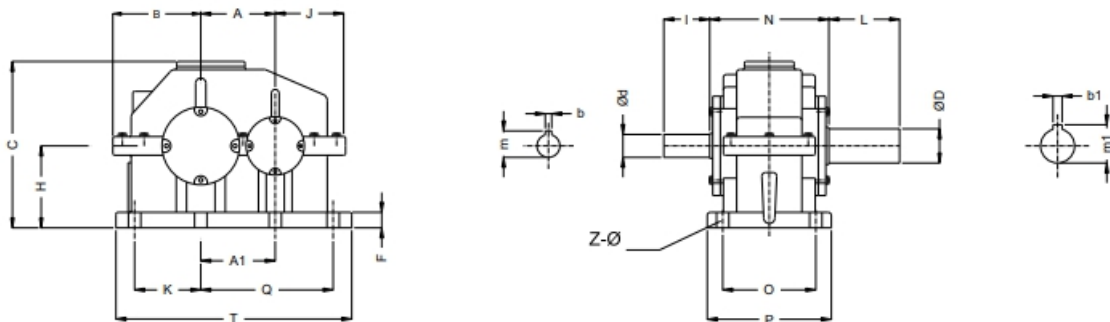


***REDUCTORES***  
**S.A.S.**

# ENGRANAJES

## MODELO ST

Modelo ST-RE Reductor de simple tren de engranajes helicoidales o bihelicoidales de disposición paralela.

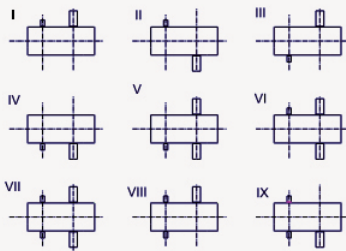


| ST-RE | Cotas de Anclaje |     |     |     |     |      |    |      | Cotas Generales |      |     |     |     |
|-------|------------------|-----|-----|-----|-----|------|----|------|-----------------|------|-----|-----|-----|
| A     | A1               | O   | P   | Q   | K   | T    | F  | Z-Ø  | B               | C    | H   | J   | N   |
| 120   | -                | 140 | 168 | 170 | 110 | 317  | 20 | 6-14 | 154             | 268  | 135 | 99  | 182 |
| 140   | -                | 160 | 200 | 205 | 130 | 375  | 25 | 6-14 | 170             | 323  | 165 | 110 | 183 |
| 160   | -                | 183 | 215 | 230 | 155 | 430  | 25 | 6-14 | 205             | 380  | 189 | 125 | 220 |
| 180   | -                | 195 | 225 | 265 | 165 | 475  | 32 | 6-14 | 215             | 405  | 208 | 140 | 242 |
| 210   | -                | 212 | 240 | 310 | 190 | 545  | 32 | 6-14 | 250             | 445  | 222 | 155 | 256 |
| 240   | -                | 235 | 265 | 365 | 250 | 657  | 32 | 6-17 | 272             | 495  | 244 | 150 | 300 |
| 280   | -                | 235 | 276 | 430 | 305 | 785  | 35 | 6-17 | 330             | 620  | 302 | 175 | 348 |
| 320   | -                | 265 | 313 | 500 | 330 | 898  | 35 | 6-20 | 370             | 700  | 345 | 210 | 340 |
| 360   | 360              | 305 | 360 | 600 | 375 | 1050 | 40 | 8-23 | 440             | 790  | 380 | 270 | 410 |
| 400   | 400              | 315 | 373 | 660 | 460 | 1185 | 40 | 8-23 | 493             | 910  | 415 | 293 | 390 |
| 450   | 450              | 360 | 420 | 695 | 470 | 1225 | 40 | 8-23 | 500             | 1050 | 470 | 275 | 460 |
| 500   | 500              | 390 | 450 | 775 | 500 | 1350 | 45 | 8-26 | 590             | 1150 | 510 | 360 | 510 |

| ST-RE | Eje de Entrada |     |    |       | Eje de Salida |     |    |       | Peso |
|-------|----------------|-----|----|-------|---------------|-----|----|-------|------|
| A     | Ød             | I   | b  | m     | ØD            | L   | b1 | m1    | Kg.  |
| 120   | 25             | 50  | 8  | 28    | 45            | 110 | 14 | 48,6  | 60   |
| 140   | 35             | 80  | 10 | 38,4  | 60            | 140 | 18 | 64,3  | 85   |
| 160   | 40             | 85  | 12 | 43,2  | 70            | 140 | 20 | 74,7  | 115  |
| 180   | 50             | 110 | 16 | 53,9  | 80            | 170 | 22 | 85,6  | 142  |
| 210   | 55             | 110 | 16 | 58,9  | 95            | 170 | 28 | 101,2 | 190  |
| 240   | 60             | 140 | 18 | 64,3  | 110           | 200 | 32 | 117,1 | 275  |
| 280   | 75             | 140 | 22 | 80,6  | 125           | 215 | 32 | 132,1 | 375  |
| 320   | 85             | 170 | 25 | 90,4  | 135           | 245 | 36 | 142,9 | 605  |
| 360   | 90             | 170 | 25 | 95,4  | 145           | 260 | 36 | 152,9 | 770  |
| 400   | 105            | 190 | 28 | 111,2 | 150           | 270 | 40 | 158,7 | 990  |
| 450   | 110            | 200 | 28 | 116,2 | 170           | 290 | 45 | 179,9 | 1150 |
| 500   | 120            | 215 | 32 | 127,1 | 180           | 310 | 45 | 189,9 | 1485 |

Los pesos son aproximados.  
Rendimiento aproximado 0,98%.  
LT= Límite Térmico  
RE= Mod. Rectificado  
El sufijo RE, significa con engranajes rectificados

### POSICIONES DE MONTAJE



# ENGRANAJES

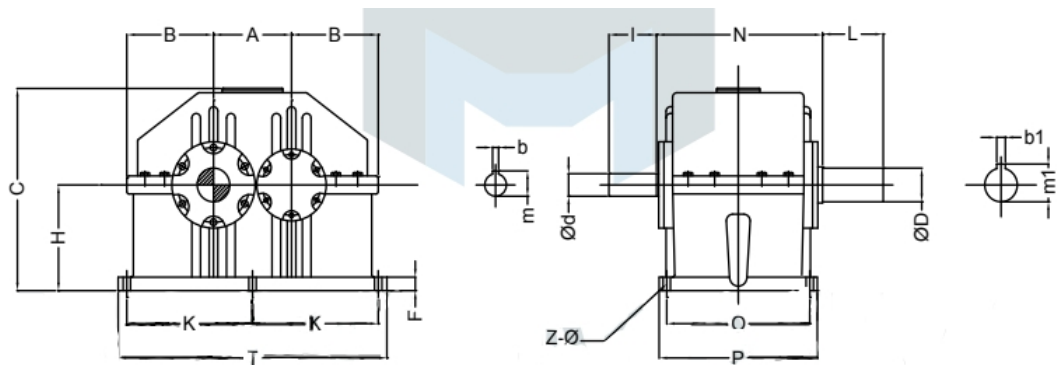
## MODELO ST

TABLA DE POTENCIAS (HP)

| Relación |             | 1:2      |     | 1:2,5    |     | 1:3      |     | 1:3,5    |     | 1:4      |     | 1:4,5    |     | 1:5      |     | 1:5,5    |     | 1:6      |     | 1:6,5    |     | LT  |
|----------|-------------|----------|-----|----------|-----|----------|-----|----------|-----|----------|-----|----------|-----|----------|-----|----------|-----|----------|-----|----------|-----|-----|
| Mod.     | Ent.<br>RPM | RE<br>HP | S   | RE<br>HP | S   | RE<br>HP | S   | RE<br>HP | S   | RE<br>HP | S   | RE<br>HP | S   | RE<br>HP | S   | RE<br>HP | S   | RE<br>HP | S   | RE<br>HP | S   | HP  |
| 120      | 1500        | 109      | 750 | 94       | 600 | 81       | 500 | 68       | 428 | 56       | 375 | 46       | 333 | 40       | 300 | 34       | 275 | 30       | 250 | 28       | 214 | 43  |
|          | 1000        | 78       | 500 | 65       | 400 | 54       | 333 | 46       | 285 | 34       | 250 | 28       | 222 | 24       | 200 | 21       | 181 | 19       | 166 | 18       | 142 |     |
|          | 500         | 48       | 250 | 34       | 200 | 28       | 166 | 23       | 142 | 18       | 125 | 15       | 111 | 13       | 100 | 10       | 90  | 10       | 83  | 9        | 71  |     |
| 140      | 1500        | 150      | 750 | 138      | 600 | 119      | 500 | 105      | 428 | 91       | 375 | 73       | 333 | 61       | 300 | 56       | 275 | 54       | 250 | 46       | 214 | 64  |
|          | 1000        | 125      | 500 | 109      | 400 | 91       | 333 | 78       | 285 | 65       | 250 | 54       | 222 | 46       | 200 | 40       | 181 | 38       | 166 | 34       | 142 |     |
|          | 81          | 250      | 68  | 200      | 61  | 166      | 50  | 142      | 43  | 125      | 34  | 111      | 28  | 100      | 23  | 90       | 19  | 83       | 18  | 71       | 160 |     |
| 500      | 1500        | 225      | 750 | 193      | 600 | 165      | 500 | 144      | 428 | 125      | 375 | 109      | 333 | 98       | 300 | 84       | 275 | 75       | 250 | 59       | 214 | 87  |
|          | 1000        | 188      | 500 | 153      | 400 | 131      | 333 | 109      | 285 | 94       | 250 | 81       | 222 | 71       | 200 | 65       | 181 | 56       | 166 | 44       | 142 |     |
|          | 500         | 119      | 250 | 95       | 200 | 81       | 166 | 68       | 142 | 56       | 125 | 50       | 111 | 40       | 100 | 34       | 90  | 28       | 83  | 23       | 71  |     |
| 180      | 1500        | 310      | 750 | 256      | 600 | 229      | 500 | 200      | 428 | 175      | 375 | 148      | 333 | 131      | 300 | 109      | 275 | 98       | 250 | 75       | 214 | 115 |
|          | 1000        | 254      | 500 | 209      | 400 | 179      | 333 | 153      | 285 | 131      | 250 | 111      | 222 | 100      | 200 | 84       | 181 | 75       | 166 | 56       | 142 |     |
|          | 500         | 156      | 250 | 135      | 200 | 111      | 166 | 94       | 142 | 78       | 125 | 65       | 111 | 54       | 100 | 46       | 90  | 40       | 83  | 30       | 71  |     |
| 210      | 1500        | 414      | 750 | 360      | 600 | 316      | 500 | 276      | 428 | 246      | 375 | 223      | 333 | 190      | 300 | 169      | 275 | 153      | 250 | 115      | 214 | 143 |
|          | 1000        | 351      | 500 | 290      | 400 | 260      | 333 | 213      | 285 | 189      | 250 | 165      | 222 | 148      | 200 | 131      | 181 | 111      | 166 | 91       | 142 |     |
|          | 500         | 223      | 250 | 185      | 200 | 156      | 166 | 131      | 142 | 105      | 125 | 91       | 111 | 78       | 100 | 68       | 90  | 59       | 83  | 50       | 71  |     |
| 240      | 1500        | 546      | 750 | 483      | 600 | 429      | 500 | 379      | 428 | 331      | 375 | 290      | 333 | 266      | 300 | 234      | 275 | 209      | 250 | 173      | 214 | 179 |
|          | 1000        | 458      | 500 | 395      | 400 | 344      | 333 | 304      | 285 | 273      | 250 | 264      | 222 | 213      | 200 | 185      | 181 | 165      | 166 | 135      | 142 |     |
|          | 500         | 325      | 250 | 278      | 200 | 234      | 166 | 200      | 142 | 175      | 125 | 148      | 111 | 131      | 100 | 111      | 90  | 98       | 83  | 71       | 71  |     |
| 280      | 1500        | -        | 750 | 671      | 600 | 580      | 500 | 509      | 428 | 451      | 375 | 391      | 333 | 364      | 300 | 333      | 275 | 300      | 250 | 250      | 214 | 220 |
|          | 1000        | 646      | 500 | 546      | 400 | 469      | 333 | 414      | 285 | 364      | 250 | 320      | 222 | 298      | 200 | 276      | 181 | 246      | 166 | 200      | 142 |     |
|          | 500         | 473      | 250 | 398      | 200 | 328      | 166 | 290      | 142 | 246      | 125 | 209      | 111 | 189      | 100 | 173      | 90  | 148      | 83  | 119      | 71  |     |
| 320      | 1500        | -        | 750 | -        | 600 | 753      | 500 | 644      | 428 | 570      | 375 | 516      | 333 | 466      | 300 | 419      | 275 | 381      | 250 | 328      | 214 | 266 |
|          | 1000        | 846      | 500 | 690      | 400 | 634      | 333 | 543      | 285 | 479      | 250 | 429      | 222 | 391      | 200 | 350      | 181 | 306      | 166 | 273      | 142 |     |
|          | 500         | 620      | 250 | 509      | 200 | 461      | 166 | 374      | 142 | 325      | 125 | 288      | 111 | 256      | 100 | 229      | 90  | 203      | 83  | 165      | 71  |     |
| 360      | 1500        | -        | 750 | -        | 600 | -        | 500 | 875      | 428 | 778      | 375 | 690      | 333 | 608      | 300 | 553      | 275 | 501      | 250 | 425      | 214 | 335 |
|          | 1000        | 1105     | 500 | 948      | 400 | 829      | 333 | 738      | 285 | 636      | 250 | 566      | 222 | 509      | 200 | 461      | 181 | 414      | 166 | 358      | 142 |     |
|          | 500         | 829      | 250 | 705      | 200 | 608      | 166 | 516      | 142 | 449      | 125 | 385      | 111 | 341      | 100 | 298      | 90  | 266      | 83  | 225      | 71  |     |
| 400      | 1500        | -        | 750 | -        | 600 | -        | 500 | -        | 428 | 1035     | 375 | 906      | 333 | 806      | 300 | 738      | 275 | 664      | 250 | 560      | 214 | 411 |
|          | 1000        | -        | 500 | 1264     | 400 | 1223     | 333 | 981      | 285 | 859      | 250 | 690      | 222 | 684      | 200 | 608      | 181 | 546      | 166 | 455      | 142 |     |
|          | 500         | 1123     | 250 | 948      | 200 | 790      | 166 | 694      | 142 | 614      | 125 | 526      | 111 | 464      | 100 | 408      | 90  | 358      | 83  | 306      | 71  |     |
| 450      | 1500        | -        | 750 | -        | 600 | -        | 500 | -        | 428 | -        | 375 | 1264     | 333 | 1089     | 300 | 983      | 275 | 894      | 250 | 753      | 214 | 500 |
|          | 1000        | -        | 500 | -        | 400 | 1456     | 333 | 1280     | 285 | 1123     | 250 | 1004     | 222 | 913      | 200 | 815      | 181 | 743      | 166 | 624      | 142 |     |
|          | 500         | 1475     | 250 | 1264     | 200 | 923      | 166 | 903      | 142 | 780      | 125 | 586      | 111 | 630      | 100 | 574      | 90  | 516      | 83  | 419      | 71  |     |
| 500      | 1500        | -        | 750 | -        | 600 | -        | 500 | -        | 428 | -        | 375 | -        | 333 | -        | 300 | 1230     | 275 | 1143     | 250 | 983      | 214 | 553 |
|          | 1000        | -        | 500 | -        | 400 | -        | 333 | 1794     | 285 | 1475     | 250 | 1310     | 222 | 1183     | 200 | 1069     | 181 | 983      | 166 | 825      | 142 |     |
|          | 500         | 1880     | 250 | 1616     | 200 | 1546     | 166 | 1230     | 142 | 1089     | 125 | 966      | 111 | 853      | 100 | 771      | 90  | 701      | 83  | 553      | 71  |     |

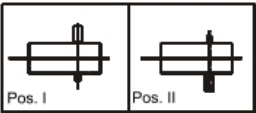
MODELO DT

Reductor de doble tren de engranajes de disposición coaxial.



| Modelo | Cotas de Anclaje |     |     |      |    |      | Cotas Generales |     |     |     |     |
|--------|------------------|-----|-----|------|----|------|-----------------|-----|-----|-----|-----|
| DT-RE  | O                | P   | K   | T    | F  | Z-Ø  | A               | B   | C   | H   | N   |
| 140    | 238              | 270 | 240 | 520  | 25 | 6-17 | 140             | 195 | 350 | 171 | 288 |
| 160    | 313              | 345 | 270 | 585  | 30 | 6-17 | 160             | 215 | 415 | 200 | 375 |
| 180    | 330              | 365 | 290 | 630  | 30 | 6-17 | 180             | 200 | 440 | 235 | 383 |
| 210    | 390              | 425 | 335 | 726  | 35 | 6-17 | 210             | 258 | 470 | 229 | 446 |
| 240    | 410              | 450 | 380 | 815  | 35 | 6-17 | 240             | 295 | 535 | 273 | 480 |
| 280    | 450              | 495 | 430 | 920  | 35 | 6-20 | 280             | 320 | 610 | 303 | 503 |
| 320    | 500              | 575 | 500 | 1076 | 40 | 6-23 | 320             | 378 | 725 | 355 | 628 |
| 360    | 560              | 695 | 560 | 1190 | 45 | 6-26 | 360             | 415 | 790 | 400 | 750 |

| Modelo | Eje de Entrada |     |    |      | Eje de Salida |     |    |       | Peso |
|--------|----------------|-----|----|------|---------------|-----|----|-------|------|
| DT-RE  | Ød             | l   | b  | m    | DØ            | L   | b1 | m1    | Kg.  |
| 140    | 35             | 80  | 10 | 38,4 | 50            | 110 | 16 | 53,9  | 135  |
| 160    | 40             | 80  | 12 | 43,2 | 60            | 140 | 18 | 64,3  | 200  |
| 180    | 50             | 110 | 16 | 53,9 | 75            | 140 | 22 | 80,6  | 230  |
| 210    | 65             | 110 | 16 | 58,9 | 85            | 170 | 25 | 90,4  | 375  |
| 240    | 30             | 140 | 18 | 64,3 | 100           | 180 | 28 | 106,2 | 475  |
| 280    | 70             | 140 | 20 | 74,7 | 105           | 190 | 28 | 111,2 | 605  |
| 320    | 80             | 170 | 22 | 85,6 | 115           | 210 | 32 | 122,1 | 935  |
| 360    | 90             | 170 | 25 | 95,4 | 145           | 260 | 36 | 152,9 | 1430 |



Los pesos son aproximados.  
Rendimientos aproximados 0,98%.  
LT = Límite Térmico.  
RE = Mod. Rectificado.



# ENGRANAJES

## MODELO DT

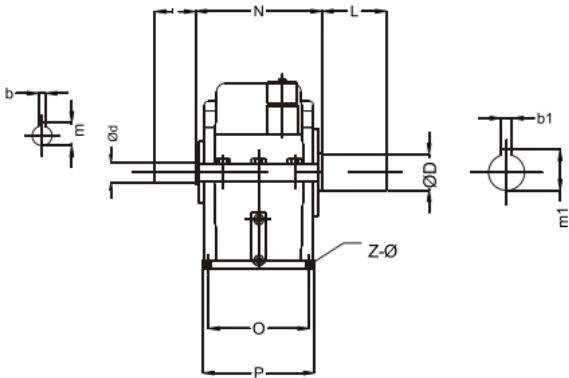
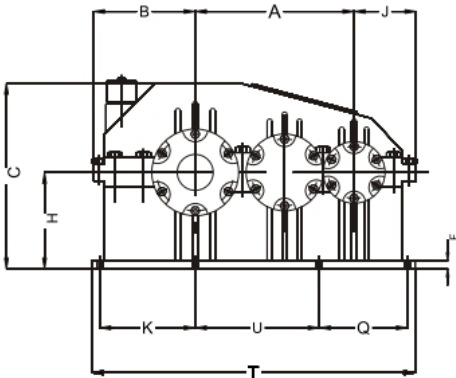
TABLA DE POTENCIAS (HP)

| Relación |             | 1:10     |     | 1:12     |     | 1:15     |     | 1:17     |    | 1:20     |    | 1:22     |    | 1:25     |    | 1:30     |    | 1:35     |    | 1:40     |    | 1:50     |    | LT  |
|----------|-------------|----------|-----|----------|-----|----------|-----|----------|----|----------|----|----------|----|----------|----|----------|----|----------|----|----------|----|----------|----|-----|
| Mod.     | Ent.<br>RPM | RE<br>HP | S   | RE<br>HP | S   | RE<br>HP | S   | RE<br>HP | S  | RE<br>HP | S  | RE<br>HP | S  | RE<br>HP | S  | RE<br>HP | S  | RE<br>HP | S  | RE<br>HP | S  | RE<br>HP | S  | HP  |
| 140      | 1500        | 28       | 150 | 28       | 125 | 28       | 100 | 28       | 88 | 28       | 75 | 25       | 68 | 18       | 60 | 15       | 50 | -        | 42 | -        | 37 | -        | 30 | 29  |
|          | 1000        | 18       | 100 | 18       | 83  | 18       | 66  | 18       | 58 | 18       | 50 | 15       | 45 | 11       | 40 | 10       | 33 | -        | 28 | -        | 25 | -        | 20 |     |
|          | 500         | 9        | 50  | 9        | 41  | 9        | 33  | 9        | 29 | 9        | 25 | 8        | 22 | 6        | 20 | 5        | 16 | -        | 14 | -        | 12 | -        | 10 |     |
| 160      | 1500        | 75       | 150 | 60       | 125 | 51       | 100 | 51       | 88 | 43       | 75 | 39       | 68 | 33       | 60 | 25       | 50 | -        | 42 | -        | 37 | -        | 20 | 40  |
|          | 1000        | 50       | 100 | 40       | 83  | 33       | 66  | 33       | 58 | 28       | 50 | 25       | 45 | 21       | 40 | 15       | 33 | -        | 28 | -        | 25 | -        | 20 |     |
|          | 500         | 25       | 50  | 20       | 41  | 16       | 33  | 16       | 29 | 14       | 25 | 13       | 22 | 11       | 20 | 8        | 16 | -        | 14 | -        | 12 | -        | 10 |     |
| 180      | 1500        | 85       | 150 | 64       | 125 | 60       | 100 | 60       | 88 | 53       | 75 | 51       | 68 | 44       | 60 | 35       | 50 | -        | 42 | -        | 37 | -        | 30 | 59  |
|          | 1000        | 55       | 100 | 43       | 83  | 40       | 66  | 40       | 58 | 35       | 50 | 3        | 45 | 29       | 40 | 23       | 33 | -        | 28 | -        | 25 | -        | 20 |     |
|          | 500         | 28       | 50  | 21       | 41  | 20       | 33  | 20       | 29 | 18       | 25 | 16       | 22 | 15       | 20 | 13       | 16 | -        | 14 | -        | 12 | -        | 10 |     |
| 210      | 1500        | 181      | 150 | 158      | 125 | 118      | 100 | 118      | 88 | 94       | 75 | 81       | 68 | 75       | 60 | 60       | 50 | -        | 42 | -        | 37 | -        | 20 | 86  |
|          | 1000        | 120      | 100 | 105      | 83  | 78       | 66  | 78       | 58 | 63       | 50 | 53       | 45 | 50       | 40 | 40       | 33 | -        | 28 | -        | 25 | -        | 20 |     |
|          | 500         | 60       | 50  | 53       | 41  | 39       | 33  | 39       | 29 | 31       | 25 | 26       | 22 | 25       | 20 | 20       | 16 | -        | 14 | -        | 12 | -        | 10 |     |
| 240      | 1500        | -        | 150 | 190      | 125 | 148      | 100 | 148      | 88 | 123      | 75 | 118      | 68 | 100      | 60 | 81       | 50 | -        | 42 | -        | 37 | -        | 30 | 115 |
|          | 1000        | -        | 100 | 125      | 83  | 98       | 66  | 98       | 58 | 83       | 50 | 115      | 45 | 65       | 40 | 53       | 33 | -        | 28 | -        | 25 | -        | 20 |     |
|          | 500         | -        | 50  | 63       | 41  | 49       | 33  | 49       | 29 | 40       | 25 | 39       | 25 | 33       | 20 | 26       | 16 | -        | 14 | -        | 12 | -        | 10 |     |
| 280      | 1500        | -        | 150 | -        | 125 | 210      | 100 | 210      | 88 | 188      | 75 | 163      | 68 | 131      | 60 | 103      | 50 | -        | 42 | -        | 37 | -        | 20 | 155 |
|          | 1000        | -        | 100 | -        | 83  | 140      | 66  | 140      | 58 | 125      | 50 | 108      | 45 | 88       | 40 | 68       | 33 | -        | 28 | -        | 25 | -        | 20 |     |
|          | 500         | -        | 50  | -        | 41  | 70       | 33  | 70       | 29 | 63       | 25 | 54       | 22 | 44       | 20 | 34       | 16 | -        | 14 | -        | 12 | -        | 10 |     |
| 320      | 1500        | -        | 150 | -        | 125 | -        | 100 | -        | 88 | -        | 75 | -        | 68 | -        | 60 | -        | 50 | -        | 42 | -        | 37 | -        | 30 | 206 |
|          | 1000        | -        | 100 | -        | 83  | -        | 66  | -        | 58 | -        | 50 | -        | 45 | -        | 40 | -        | 33 | -        | 28 | -        | 25 | -        | 20 |     |
|          | 500         | -        | 50  | -        | 41  | -        | 33  | -        | 29 | -        | 25 | -        | 22 | -        | 20 | -        | 16 | -        | 14 | -        | 12 | -        | 10 |     |
| 360      | 1500        | -        | 150 | -        | 125 | -        | 100 | -        | 88 | -        | 75 | -        | 68 | -        | 60 | -        | 50 | -        | 42 | -        | 37 | -        | 20 | 275 |
|          | 1000        | -        | 100 | -        | 83  | -        | 66  | -        | 58 | -        | 50 | -        | 45 | -        | 40 | -        | 33 | -        | 28 | -        | 25 | -        | 20 |     |
|          | 500         | -        | 50  | -        | 41  | -        | 33  | -        | 29 | -        | 25 | -        | 22 | -        | 20 | -        | 16 | -        | 14 | -        | 12 | -        | 10 |     |

# ENGRANAJES

## MODELO DTP

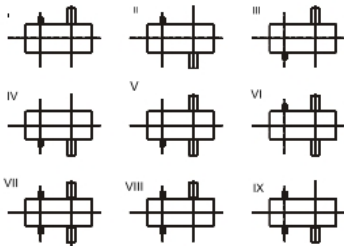
Reductor de doble tren de engranajes de disposición paralela.



| Modelo | Cotas de Anclaje |     |     |     |     |      |    |      | Cotas Generales |     |     |      |     |     |
|--------|------------------|-----|-----|-----|-----|------|----|------|-----------------|-----|-----|------|-----|-----|
| DTP-RE | O                | P   | K   | U   | Q   | T    | F  | Z-Ø  | A               | B   | J   | C    | H   | N   |
| 195    | 166              | 190 | 138 | -   | 288 | 450  | 20 | 6-14 | 195             | 150 | 105 | 250  | 130 | 190 |
| 230    | 190              | 220 | 162 | -   | 342 | 530  | 20 | 6-14 | 230             | 175 | 125 | 310  | 160 | 220 |
| 280    | 265              | 295 | 165 | 220 | 180 | 612  | 25 | 8-14 | 280             | 185 | 147 | 355  | 185 | 302 |
| 320    | 295              | 325 | 190 | 250 | 220 | 700  | 30 | 8-14 | 320             | 210 | 170 | 400  | 200 | 327 |
| 370    | 315              | 345 | 230 | 290 | 250 | 815  | 30 | 8-17 | 370             | 255 | 205 | 460  | 245 | 359 |
| 420    | 335              | 375 | 250 | 330 | 270 | 900  | 30 | 8-17 | 420             | 275 | 205 | 500  | 270 | 390 |
| 490    | 335              | 405 | 290 | 385 | 295 | 1040 | 35 | 8-20 | 490             | 330 | 220 | 550  | 280 | 418 |
| 560    | 380              | 428 | 315 | 435 | 335 | 1150 | 35 | 8-20 | 560             | 345 | 245 | 630  | 330 | 449 |
| 640    | 405              | 450 | 385 | 500 | 355 | 1300 | 35 | 8-23 | 640             | 410 | 250 | 750  | 390 | 480 |
| 720    | 450              | 500 | 445 | 540 | 425 | 1470 | 40 | 8-23 | 720             | 475 | 275 | 845  | 430 | 525 |
| 810    | 480              | 532 | 485 | 630 | 446 | 1622 | 40 | 8-23 | 810             | 516 | 296 | 900  | 450 | 580 |
| 900    | 512              | 575 | 528 | 665 | 528 | 1785 | 40 | 8-26 | 900             | 560 | 330 | 1030 | 520 | 670 |
| 1050   | CONSULTAR        |     |     |     |     |      |    |      |                 |     |     |      |     |     |

| Modelo | Cotas Generales |     |    |       | Eje de Salida |     |    |       | Peso |
|--------|-----------------|-----|----|-------|---------------|-----|----|-------|------|
| DTP-RE | Ød              | l   | b  | m     | DØ            | L   | b1 | m1    | Kg.  |
| 195    | 20              | 45  | 6  | 22,6  | 40            | 85  | 12 | 43,2  | 40   |
| 230    | 25              | 50  | 8  | 28    | 45            | 90  | 14 | 48,6  | 80   |
| 280    | 28              | 60  | 8  | 31    | 50            | 110 | 16 | 53,9  | 145  |
| 320    | 35              | 80  | 10 | 38,4  | 75            | 134 | 20 | 79,7  | 210  |
| 370    | 40              | 82  | 12 | 43,2  | 85            | 164 | 22 | 90,6  | 297  |
| 420    | 50              | 110 | 14 | 53,6  | 100           | 172 | 28 | 106,2 | 418  |
| 490    | 60              | 136 | 18 | 64,3  | 105           | 190 | 28 | 111,2 | 540  |
| 560    | 60              | 136 | 18 | 64,3  | 115           | 190 | 32 | 122,1 | 715  |
| 640    | 80              | 164 | 22 | 85,6  | 145           | 260 | 36 | 152,9 | 990  |
| 720    | 70              | 140 | 20 | 74,7  | 160           | 270 | 40 | 168,7 | 1300 |
| 810    | 100             | 180 | 28 | 106,2 | 180           | 310 | 45 | 189,9 | 1595 |
| 900    | 120             | 215 | 32 | 127,1 | 200           | 310 | 45 | 209,9 | 2080 |
| 1050   | CONSULTAR       |     |    |       |               |     |    |       |      |

POSICIONES DE MONTAJE



Los pesos son aproximados

El sufijo RE significa con engranajes rectificadas.

# ENGRANAJES

## MODELO DTP

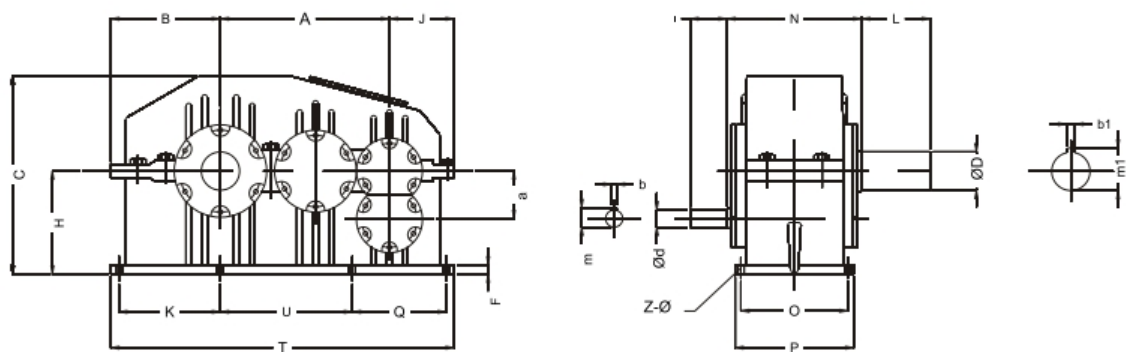
### TABLA DE POTENCIAS (HP)

| Relación |             | 1:10 |     | 1:12 |     | 1:15 |     | 1:20 |    | 1:25 |    | 1:30 |    | 1:35 |    | 1:40 |    | LT  |
|----------|-------------|------|-----|------|-----|------|-----|------|----|------|----|------|----|------|----|------|----|-----|
| Mod.     | Ent.<br>RPM | RE   | S   | RE   | S   | RE   | S   | RE   | S  | RE   | S  | RE   | S  | RE   | S  | RE   | S  | HP  |
|          |             | HP   |     | HP   |     | HP   |     | HP   |    | HP   |    | HP   |    | HP   |    | HP   |    |     |
| 195      | 1500        | 21   | 150 | 18   | 125 | 16   | 100 | 13   | 75 | 10   | 60 | 10   | 50 | 8    | 42 | -    | 37 | 23  |
| 230      | 1500        | 32   | 150 | 27   | 125 | 24   | 100 | 20   | 75 | 14   | 60 | 11   | 50 | -    | 42 | -    |    | 34  |
| 280      | 1500        | 58   | 150 | 50   | 125 | 48   | 100 | 35   | 75 | 26   | 60 | 21   | 50 | -    | 42 | -    | 37 | 40  |
|          | 1000        | 44   | 100 | 39   | 83  | 35   | 66  | 24   | 50 | 19   | 40 | 15   | 33 | -    | 28 | -    | 25 |     |
|          | 500         | 26   | 50  | 21   | 41  | 19   | 33  | 14   | 25 | 10   | 20 | 9    | 16 | -    | 14 | -    | 12 |     |
| 320      | 1500        | 103  | 150 | 83   | 125 | 79   | 100 | 69   | 75 | 48   | 60 | 35   | 50 | -    | 42 | -    | 37 | 66  |
|          | 1000        | 80   | 100 | 64   | 83  | 59   | 66  | 50   | 50 | 34   | 40 | 24   | 33 | -    | 28 | -    | 25 |     |
|          | 500         | 49   | 50  | 36   | 41  | 34   | 33  | 26   | 25 | 16   | 20 | 11   | 16 | -    | 14 | -    | 12 |     |
| 370      | 1500        | 140  | 150 | 128  | 125 | 121  | 100 | 90   | 75 | 78   | 60 | 55   | 50 | -    | 42 | -    | 37 | 94  |
|          | 1000        | 111  | 100 | 101  | 83  | 88   | 66  | 69   | 50 | 50   | 40 | 39   | 33 | -    | 28 | -    | 25 |     |
|          | 500         | 69   | 50  | 60   | 41  | 48   | 33  | 36   | 25 | 26   | 20 | 20   | 16 | -    | 14 | -    | 12 |     |
| 420      | 1500        | 215  | 150 | 195  | 125 | 185  | 100 | 135  | 75 | 98   | 60 | 78   | 50 | -    | 42 | -    | 37 | 119 |
|          | 1000        | 174  | 100 | 156  | 83  | 135  | 66  | 94   | 50 | 69   | 40 | 54   | 33 | -    | 28 | -    | 25 |     |
|          | 500         | 110  | 50  | 96   | 41  | 74   | 33  | 50   | 25 | 36   | 20 | 29   | 16 | -    | 14 | -    | 12 |     |
| 490      | 1500        | 269  | 150 | 250  | 125 | 243  | 100 | 171  | 75 | 138  | 60 | 119  | 50 | -    | 42 | -    | 37 | 168 |
|          | 1000        | 243  | 100 | 223  | 83  | 179  | 66  | 123  | 50 | 101  | 40 | 84   | 33 | -    | 28 | -    | 25 |     |
|          | 500         | 145  | 50  | 125  | 41  | 101  | 33  | 68   | 25 | 54   | 20 | 44   | 16 | -    | 14 | -    | 12 |     |
| 560      | 1500        | 343  | 150 | 283  | 125 | 276  | 100 | 219  | 75 | 179  | 60 | 155  | 50 | -    | 42 | -    | 37 | 194 |
|          | 1000        | 288  | 100 | 230  | 83  | 213  | 66  | 169  | 50 | 128  | 40 | 110  | 33 | -    | 28 | -    | 25 |     |
|          | 500         | 190  | 50  | 150  | 41  | 119  | 33  | 90   | 25 | 69   | 20 | 58   | 16 | -    | 14 | -    | 12 |     |
| 640      | 1500        | 473  | 150 | 439  | 125 | 430  | 100 | 325  | 75 | 270  | 60 | 238  | 50 | -    | 42 | -    | 37 | 251 |
|          | 1000        | 398  | 100 | 364  | 83  | 338  | 66  | 263  | 50 | 195  | 40 | 169  | 33 | -    | 28 | -    | 25 |     |
|          | 500         | 271  | 50  | 241  | 41  | 190  | 33  | 145  | 25 | 106  | 20 | 89   | 16 | -    | 14 | -    | 12 |     |
| 720      | 1500        | 594  | 150 | 553  | 125 | 545  | 100 | 390  | 75 | 359  | 60 | 314  | 50 | -    | 42 | -    | 37 | 335 |
|          | 1000        | 506  | 100 | 465  | 83  | 458  | 66  | 306  | 50 | 265  | 40 | 228  | 33 | -    | 28 | -    | 25 |     |
|          | 500         | 354  | 50  | 316  | 41  | 290  | 33  | 171  | 25 | 145  | 20 | 123  | 16 | -    | 14 | -    | 12 |     |
| 810      | 1500        | -    | 150 | 759  | 125 | 745  | 100 | 608  | 75 | 460  | 60 | 405  | 50 | -    | 42 | -    | 37 | 411 |
|          | 1000        | 739  | 100 | 675  | 83  | 659  | 66  | 495  | 50 | 338  | 40 | 291  | 33 | -    | 28 | -    | 25 |     |
|          | 500         | 525  | 50  | 449  | 41  | 410  | 33  | 281  | 25 | 190  | 20 | 156  | 16 | -    | 14 | -    | 12 |     |
| 900      | 1500        | -    | 150 | -    | 125 | -    | 100 | 798  | 75 | 654  | 60 | 574  | 50 | -    | 42 | -    | 37 | 500 |
|          | 1000        | 1013 | 100 | 850  | 83  | 831  | 66  | 663  | 50 | 485  | 40 | 419  | 33 | -    | 28 | -    | 25 |     |
|          | 500         | 731  | 50  | 600  | 41  | 494  | 33  | 381  | 25 | 273  | 20 | 231  | 16 | -    | 14 | -    | 12 |     |

# ENGRANAJES

## MODELO TTP

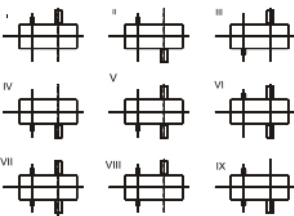
Reductor de triple tren de engranajes de disposición paralela



| Modelo | Cotas de Anclajes |     |     |     |     |      |    |       | Cotas Generales |     |     |      |     |     |     |
|--------|-------------------|-----|-----|-----|-----|------|----|-------|-----------------|-----|-----|------|-----|-----|-----|
| TTP-RE | O                 | P   | K   | U   | Q   | T    | F  | Z-Ø   | A               | B   | J   | C    | H   | N   | a   |
| 195    | 166               | 190 | 138 | -   | 288 | 450  | 20 | 06-14 | 195             | 140 | 95  | 250  | 130 | 190 | 50  |
| 230    | 190               | 220 | 162 | -   | 342 | 530  | 20 | 06-14 | 230             | 175 | 125 | 310  | 160 | 220 | 65  |
| 280    | 265               | 295 | 165 | 220 | 180 | 612  | 25 | 08-14 | 280             | 185 | 147 | 355  | 185 | 302 | 80  |
| 320    | 295               | 325 | 190 | 250 | 220 | 700  | 30 | 08-14 | 320             | 210 | 170 | 400  | 200 | 327 | 100 |
| 370    | 315               | 345 | 230 | 290 | 250 | 815  | 30 | 08-17 | 370             | 255 | 205 | 460  | 245 | 359 | 110 |
| 420    | 335               | 375 | 250 | 330 | 270 | 900  | 30 | 08-17 | 420             | 275 | 205 | 500  | 270 | 390 | 120 |
| 490    | 355               | 405 | 290 | 385 | 295 | 1040 | 35 | 08-20 | 490             | 330 | 220 | 550  | 280 | 418 | 140 |
| 560    | 380               | 428 | 315 | 435 | 335 | 1150 | 35 | 08-20 | 560             | 345 | 245 | 630  | 330 | 449 | 160 |
| 640    | 405               | 450 | 385 | 500 | 355 | 1300 | 35 | 08-23 | 640             | 410 | 250 | 750  | 390 | 480 | 200 |
| 720    | 450               | 500 | 445 | 540 | 425 | 1470 | 40 | 08-23 | 720             | 475 | 275 | 845  | 430 | 525 | 210 |
| 810    | 480               | 532 | 485 | 630 | 445 | 1622 | 40 | 08-23 | 810             | 516 | 296 | 900  | 450 | 580 | 240 |
| 900    | 512               | 575 | 528 | 665 | 528 | 1785 | 40 | 08-26 | 900             | 560 | 330 | 1030 | 520 | 670 | 280 |
| 1050   | CONSULTAR         |     |     |     |     |      |    |       |                 |     |     |      |     |     |     |

| Modelo | Eje de Entrada |     |    |      | Eje de Salida |     |    |       | Peso |
|--------|----------------|-----|----|------|---------------|-----|----|-------|------|
| TTP-RE | Ød             | I   | b  | M    | ØD            | L   | b1 | m1    | Kg.  |
| 195    | 17             | 40  | 5  | 19,2 | 40            | 85  | 17 | 43,2  | 52   |
| 230    | 20             | 45  | 6  | 22,6 | 45            | 90  | 14 | 48,6  | 90   |
| 280    | 25             | 66  | 8  | 28   | 50            | 110 | 16 | 53,9  | 200  |
| 320    | 30             | 63  | 8  | 33   | 75            | 134 | 20 | 79,7  | 340  |
| 370    | 35             | 80  | 10 | 38,4 | 85            | 164 | 22 | 90,6  | 385  |
| 420    | 40             | 80  | 12 | 43,2 | 100           | 172 | 28 | 106,2 | 450  |
| 490    | 50             | 105 | 14 | 53,6 | 105           | 195 | 28 | 111,2 | 580  |
| 560    | 45             | 86  | 14 | 48,6 | 115           | 190 | 32 | 122,1 | 750  |
| 640    | 65             | 140 | 18 | 69,3 | 145           | 260 | 36 | 152,9 | 1010 |
| 720    | 65             | 140 | 18 | 69,3 | 160           | 275 | 40 | 168,7 | 1485 |
| 810    | 70             | 140 | 20 | 74,7 | 180           | 310 | 45 | 189,9 | 1870 |
| 900    | 80             | 165 | 22 | 85,6 | 200           | 310 | 45 | 209,9 | 2200 |
| 1050   | CONSULTAR      |     |    |      |               |     |    |       |      |

Los pesos son aproximados.  
Rendimiento aproximado 0,94%  
LT= Limite Térmico  
RE= Mod. Rectificado  
El sufijo RE, significa con engranajes rectificados



POSICIONES DE MONTAJE



# ENGRANAJES

## MODELO TTP

TABLA DE POTENCIAS (HP)

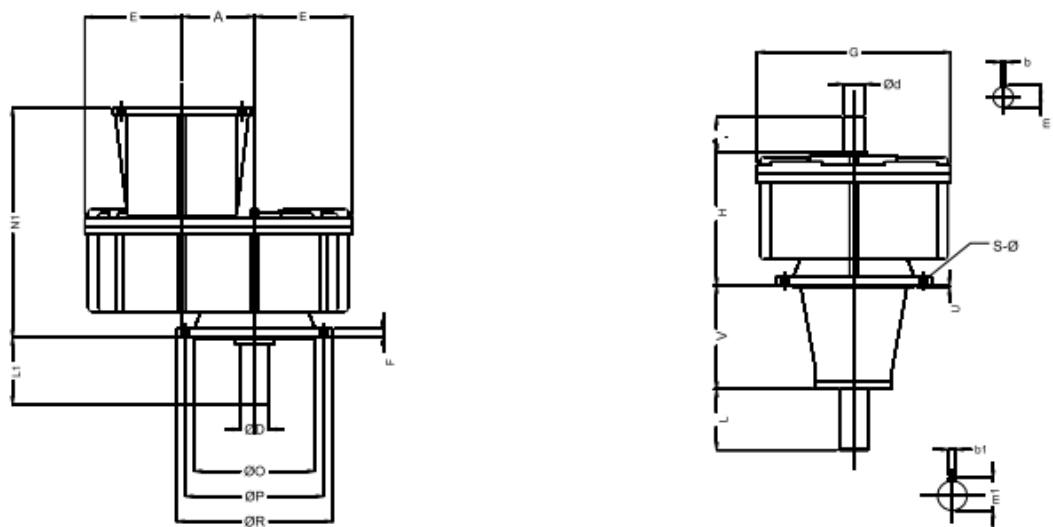
| Relación |             | 1:20     |    | 1:22     |    | 1:25     |    | 1:28     |    | 1:30     |    | 1:35     |    | 1:40     |    | 1:50     |    | 1:60     |    | 1:75     |    | 1:100    |    | 1:125    |    | LT  |
|----------|-------------|----------|----|----------|----|----------|----|----------|----|----------|----|----------|----|----------|----|----------|----|----------|----|----------|----|----------|----|----------|----|-----|
| Mod.     | Ent.<br>RPM | RE<br>HP | S  | RE<br>HP | S  | RE<br>HP | S  | RE<br>HP | S  | RE<br>HP | S  | RE<br>HP | S  | RE<br>HP | S  | RE<br>HP | S  | RE<br>HP | S  | RE<br>HP | S  | RE<br>HP | S  | RE<br>HP | S  | HP  |
| 195      | 1500        | -        | 75 | -        | 68 | -        | 60 | -        | 53 | -        | 50 | 8        | 42 | 7        | 37 | 6        | 30 | 4        | 25 | 3        | 20 | 2        | 15 | 1        | 12 | 23  |
| 230      | 1500        | -        | 75 | -        | 68 | -        | 60 | -        | 53 | -        | 50 | 11       | 42 | 10       | 37 | 8        | 30 | 6        | 25 | 5        | 20 | 4        | 15 | 3        | 12 | 34  |
| 280      | 1500        | -        | 75 | -        | 68 | -        | 60 | -        | 53 | -        | 50 | 21       | 42 | 20       | 37 | 16       | 30 | 14       | 25 | 10       | 20 | 8        | 15 | 6        | 12 | 40  |
|          | 1000        | -        | 50 | -        | 45 | -        | 40 | -        | 36 | -        | 33 | 16       | 28 | 14       | 25 | 10       | 20 | 9        | 16 | 7        | 13 | 5        | 10 | 4        | 8  |     |
|          | 500         | -        | 25 | -        | 23 | -        | 20 | -        | 18 | -        | 16 | 9        | 14 | 8        | 12 | 5        | 10 | 4        | 8  | 3        | 6  | 2,5      | 5  | 2        | 4  |     |
| 320      | 1500        | -        | 75 | -        | 68 | -        | 60 | -        | 53 | -        | 50 | 38       | 42 | 34       | 37 | 30       | 30 | 25       | 25 | 17       | 20 | 11       | 15 | 9        | 12 | 66  |
|          | 1000        | -        | 50 | -        | 45 | -        | 40 | -        | 36 | -        | 33 | 28       | 28 | 24       | 25 | 21       | 20 | 16       | 16 | 10       | 13 | 8        | 10 | 6        | 8  |     |
|          | 500         | -        | 25 | -        | 23 | -        | 20 | -        | 18 | -        | 16 | 14       | 14 | 13       | 12 | 10       | 10 | 8        | 8  | 5        | 6  | 4        | 5  | 3        | 4  |     |
| 370      | 1500        | 102      | 75 | 93       | 68 | 87       | 60 | 76       | 53 | 65       | 50 | 60       | 42 | 55       | 37 | 43       | 30 | 38       | 25 | 26       | 20 | 19       | 15 | 15       | 12 | 94  |
|          | 1000        | 73       | 50 | 66       | 45 | 62       | 40 | 54       | 36 | 46       | 33 | 44       | 28 | 40       | 25 | 29       | 20 | 24       | 16 | 19       | 13 | 13       | 10 | 10       | 8  |     |
|          | 500         | -        | 25 | -        | 23 | -        | 20 | -        | 18 | -        | 16 | 24       | 14 | 20       | 12 | 14       | 10 | 12       | 8  | 9        | 6  | 6        | 5  | 5        | 4  |     |
| 420      | 1500        | 151      | 75 | 126      | 68 | 114      | 60 | 108      | 53 | 103      | 50 | 96       | 42 | 83       | 37 | 78       | 30 | 59       | 25 | 45       | 20 | 38       | 15 | 28       | 12 | 119 |
|          | 1000        | 106      | 50 | 90       | 45 | 80       | 40 | 76       | 36 | 72       | 33 | 69       | 28 | 63       | 25 | 49       | 20 | 40       | 16 | 25       | 13 | 21       | 10 | 19       | 8  |     |
|          | 500         | -        | 25 | -        | 23 | -        | 20 | -        | 18 | -        | 16 | 36       | 14 | 34       | 12 | 26       | 10 | 21       | 8  | 17       | 6  | 13       | 5  | 9        | 4  |     |
| 490      | 1500        | 195      | 75 | 176      | 68 | 157      | 60 | 142      | 53 | 132      | 50 | 121      | 42 | 111      | 37 | 95       | 30 | 78       | 25 | 64       | 20 | 49       | 15 | 39       | 12 | 168 |
|          | 1000        | 135      | 50 | 123      | 45 | 107      | 40 | 100      | 36 | 93       | 33 | 88       | 28 | 78       | 25 | 63       | 20 | 53       | 16 | 43       | 13 | 31       | 10 | 25       | 8  |     |
|          | 500         | -        | 25 | -        | 23 | -        | 20 | -        | 18 | -        | 16 | 44       | 14 | 40       | 12 | 34       | 10 | 26       | 8  | 21       | 6  | 16       | 5  | 13       | 4  |     |
| 560      | 1500        | 270      | 75 | 240      | 68 | 210      | 60 | 190      | 53 | 173      | 50 | 144      | 42 | 135      | 37 | 121      | 30 | 105      | 25 | 79       | 20 | 58       | 15 | 48       | 12 | 194 |
|          | 1000        | 193      | 50 | 172      | 45 | 150      | 40 | 126      | 36 | 119      | 33 | 110      | 28 | 106      | 25 | 81       | 20 | 65       | 16 | 51       | 13 | 39       | 10 | 30       | 8  |     |
|          | 500         | -        | 25 | -        | 23 | -        | 20 | -        | 18 | -        | 16 | 60       | 14 | 55       | 12 | 41       | 10 | 35       | 8  | 26       | 6  | 20       | 5  | 15       | 4  |     |
| 640      | 1500        | 364      | 75 | 342      | 68 | 320      | 60 | 283      | 53 | 265      | 50 | 243      | 42 | 225      | 37 | 179      | 30 | 156      | 25 | 123      | 20 | 88       | 15 | 75       | 12 | 251 |
|          | 1000        | 256      | 50 | 240      | 45 | 225      | 40 | 200      | 36 | 186      | 33 | 179      | 28 | 168      | 25 | 123      | 20 | 98       | 16 | 81       | 13 | 59       | 10 | 50       | 8  |     |
|          | 500         | -        | 25 | -        | 23 | -        | 20 | -        | 18 | -        | 16 | 101      | 14 | 89       | 12 | 64       | 10 | 54       | 8  | 44       | 6  | 30       | 5  | 25       | 4  |     |
| 720      | 1500        | 450      | 75 | 440      | 68 | 430      | 60 | 390      | 53 | 360      | 50 | 318      | 42 | 280      | 37 | 239      | 30 | 195      | 25 | 138      | 20 | 121      | 15 | 98       | 12 | 335 |
|          | 1000        | 314      | 50 | 309      | 45 | 302      | 40 | 279      | 36 | 253      | 33 | 239      | 28 | 210      | 25 | 159      | 20 | 126      | 16 | 106      | 13 | 81       | 10 | 65       | 8  |     |
|          | 500         | -        | 25 | -        | 23 | -        | 20 | -        | 18 | -        | 16 | 128      | 14 | 115      | 12 | 93       | 10 | 68       | 8  | 55       | 6  | 41       | 5  | 34       | 4  |     |
| 810      | 1500        | 679      | 75 | 608      | 68 | 560      | 60 | 530      | 53 | 504      | 50 | 450      | 42 | 419      | 37 | 371      | 30 | 280      | 25 | 215      | 20 | 163      | 15 | 126      | 12 | 411 |
|          | 1000        | 476      | 50 | 428      | 45 | 400      | 40 | 374      | 36 | 360      | 33 | 343      | 28 | 317      | 25 | 260      | 20 | 194      | 16 | 145      | 13 | 113      | 10 | 85       | 8  |     |
|          | 500         | -        | 25 | -        | 23 | -        | 20 | -        | 18 | -        | 16 | 200      | 14 | 184      | 12 | 138      | 10 | 101      | 8  | 75       | 6  | 58       | 5  | 44       | 4  |     |
| 900      | 1500        | -        | 75 | -        | 68 | -        | 60 | -        | 53 | -        | 50 | 505      | 42 | 480      | 37 | 452      | 30 | 381      | 25 | 272      | 20 | 210      | 15 | 173      | 12 | 500 |
|          | 1000        | -        | 50 | -        | 45 | -        | 40 | -        | 36 | -        | 33 | 337      | 28 | 326      | 25 | 320      | 20 | 263      | 16 | 188      | 13 | 145      | 10 | 117      | 8  |     |



# ENGRANAJES

## MODELO STV

Reductor de simple tren de engranajes de disposición vertical.



Nota: En casos en que la potencia del equipo supere el límite térmico será necesario el agregado de un intercambiador de calor.  
Como así también un sistema de lubricación forzada, para tales casos consultar con nuestro Dto. Técnico.

| Modelo | Eje de entrada |     |    |      | Eje de salida |     |     |    |       | Cotas de Anclaje |     |     |    |   |       | Cotas Generales |     |     |     |             |     | Peso |  |
|--------|----------------|-----|----|------|---------------|-----|-----|----|-------|------------------|-----|-----|----|---|-------|-----------------|-----|-----|-----|-------------|-----|------|--|
| STV    | Ød             | I   | b  | m    | ØD            | L   | L1  | b1 | m1    | ØO               | ØP  | ØR  | F  | U | S-Ø   | A               | E   | G   | H   | H1          | V   | Kg   |  |
| 180    | 50             | 110 | 14 | 53,6 | 80            | 170 | 130 | 22 | 85,6  | 350              | 400 | 450 | 25 | 5 | 08-18 | 180             | 230 | 460 | 270 | SEGUN MOTOR | 298 | 195  |  |
| 210    | 55             | 110 | 16 | 58,9 | 95            | 170 | 140 | 25 | 100,4 | 350              | 400 | 450 | 25 | 5 | 08-18 | 210             | 280 | 560 | 280 |             | 298 | 275  |  |
| 240    | 60             | 140 | 18 | 64,3 | 100           | 200 | 180 | 28 | 106,2 | 350              | 400 | 450 | 25 | 5 | 08-18 | 240             | 295 | 590 | 305 |             | 298 | 410  |  |
| 280    | 75             | 140 | 20 | 79,7 | 125           | 215 | 160 | 32 | 132,1 | 550              | 600 | 660 | 30 | 5 | 08-22 | 280             | 325 | 650 | 343 |             | 500 | 500  |  |
| 320    | 85             | 170 | 22 | 90,6 | 135           | 245 | 180 | 36 | 142,9 | 550              | 600 | 660 | 30 | 5 | 08-22 | 320             | 360 | 720 | 368 |             | 500 | 595  |  |
| 360    | 90             | 170 | 25 | 95,4 | 125           | 225 | 161 | 32 | 132,1 | 660              | 800 | 880 | 30 | 5 | 08-27 | 360             | 420 | 840 | 420 |             | 700 | 805  |  |
| 400    | CONSULTAR      |     |    |      |               |     |     |    |       |                  |     |     |    |   |       |                 |     |     |     |             |     |      |  |
| 450    | CONSULTAR      |     |    |      |               |     |     |    |       |                  |     |     |    |   |       |                 |     |     |     |             |     |      |  |
| 500    | CONSULTAR      |     |    |      |               |     |     |    |       |                  |     |     |    |   |       |                 |     |     |     |             |     |      |  |

| Relaciones |      | 1:1,2 |     | 1:2,5 |     | 1:3 |     | 1:3,5 |     | 1:4 |     | 1:4,5 |     | 1:5 |     | 1:5,5 |     | 1:6 |     | 1:7 |     | LT   |
|------------|------|-------|-----|-------|-----|-----|-----|-------|-----|-----|-----|-------|-----|-----|-----|-------|-----|-----|-----|-----|-----|------|
| STV        | RPM  | HP    | S   | HP    | S   | HP  | S   | HP    | S   | HP  | S   | HP    | S   | HP  | S   | HP    | S   | HP  | S   | HP  | S   | HP   |
| 180        | 1500 | 234   | 750 | 180   | 600 | 156 | 500 | 148   | 420 | 126 | 375 | 124   | 330 | 111 | 300 | 92    | 270 | 82  | 250 | 51  | 214 | 228  |
|            | 1000 | 174   | 500 | 135   | 400 | 120 | 333 | 108   | 280 | 111 | 250 | 94    | 220 | 85  | 200 | 71    | 180 | 63  | 166 | 36  | 142 |      |
|            | 500  | 120   | 250 | 84    | 200 | 69  | 166 | 60    | 140 | 65  | 125 | 55    | 110 | 43  | 100 | 39    | 90  | 34  | 83  | 21  | 71  |      |
| 210        | 1500 | 360   | 750 | 312   | 600 | 270 | 500 | 240   | 420 | 213 | 375 | 192   | 330 | 171 | 300 | 150   | 270 | 132 | 250 | 96  | 214 | 288  |
|            | 1000 | 300   | 500 | 255   | 400 | 216 | 333 | 183   | 280 | 162 | 250 | 144   | 220 | 129 | 200 | 114   | 180 | 96  | 166 | 75  | 142 |      |
|            | 500  | 189   | 250 | 156   | 200 | 132 | 166 | 111   | 140 | 90  | 125 | 78    | 110 | 69  | 100 | 60    | 90  | 51  | 83  | 39  | 71  |      |
| 240        | 1500 | 480   | 750 | 420   | 600 | 375 | 500 | 330   | 420 | 291 | 375 | 261   | 330 | 234 | 300 | 210   | 270 | 183 | 250 | 147 | 214 | 360  |
|            | 1000 | 405   | 500 | 345   | 400 | 300 | 333 | 264   | 280 | 237 | 250 | 210   | 220 | 189 | 200 | 168   | 180 | 147 | 166 | 114 | 142 |      |
|            | 500  | 285   | 250 | 240   | 200 | 201 | 166 | 174   | 140 | 150 | 125 | 132   | 110 | 114 | 100 | 100   | 90  | 84  | 83  | 60  | 71  |      |
| 280        | 1500 | -     | 750 | 585   | 600 | 516 | 500 | 450   | 420 | 393 | 375 | 348   | 330 | 315 | 300 | 288   | 270 | 264 | 250 | 219 | 214 | 432  |
|            | 1000 | 564   | 500 | 474   | 400 | 411 | 333 | 360   | 280 | 318 | 250 | 288   | 220 | 264 | 200 | 240   | 180 | 222 | 166 | 186 | 142 |      |
|            | 500  | 405   | 250 | 345   | 200 | 300 | 166 | 255   | 140 | 219 | 125 | 192   | 110 | 168 | 100 | 150   | 90  | 132 | 83  | 108 | 71  |      |
| 320        | 1500 | -     | 750 | -     | 600 | 660 | 500 | 582   | 420 | 510 | 375 | 450   | 330 | 408 | 300 | 366   | 270 | 336 | 250 | 288 | 214 | 528  |
|            | 1000 | 735   | 500 | 630   | 400 | 552 | 333 | 489   | 280 | 429 | 250 | 381   | 220 | 342 | 200 | 306   | 180 | 276 | 166 | 240 | 142 |      |
|            | 500  | 540   | 250 | 465   | 200 | 402 | 166 | 342   | 140 | 294 | 125 | 258   | 110 | 225 | 100 | 204   | 90  | 186 | 83  | 144 | 71  |      |
| 360        | 1500 | -     | 750 | -     | 600 | -   | 500 | 720   | 420 | 636 | 375 | 570   | 330 | 504 | 300 | 468   | 270 | 417 | 250 | 345 | 214 | 624  |
|            | 1000 | 915   | 500 | 780   | 400 | 690 | 333 | 615   | 280 | 528 | 250 | 474   | 220 | 420 | 200 | 378   | 180 | 345 | 166 | 294 | 142 |      |
|            | 500  | 690   | 250 | 588   | 200 | 504 | 166 | 432   | 140 | 372 | 125 | 321   | 110 | 279 | 100 | 246   | 90  | 219 | 83  | 180 | 71  |      |
| 400        | 1500 | -     | 750 | -     | 600 | -   | 500 | -     | 420 | -   | 375 | -     | 330 | -   | 300 | -     | 270 | -   | 250 | -   | 214 | 768  |
|            | 1000 | -     | 500 | -     | 400 | -   | 333 | -     | 280 | -   | 250 | -     | 220 | -   | 200 | -     | 180 | -   | 166 | -   | 142 |      |
|            | 500  | -     | 250 | -     | 200 | -   | 166 | -     | 140 | -   | 125 | -     | 110 | -   | 100 | -     | 90  | -   | 83  | -   | 71  |      |
| 450        | 1500 | -     | 750 | -     | 600 | -   | 500 | -     | 420 | -   | 375 | -     | 330 | -   | 300 | -     | 270 | -   | 250 | -   | 214 | 912  |
|            | 1000 | -     | 500 | -     | 400 | -   | 333 | -     | 280 | -   | 250 | -     | 220 | -   | 200 | -     | 180 | -   | 166 | -   | 142 |      |
|            | 500  | -     | 250 | -     | 200 | -   | 166 | -     | 140 | -   | 125 | -     | 110 | -   | 100 | -     | 90  | -   | 83  | -   | 71  |      |
| 500        | 1500 | -     | 750 | -     | 600 | -   | 500 | -     | 420 | -   | 375 | -     | 330 | -   | 300 | -     | 270 | -   | 250 | -   | 214 | 1056 |
|            | 1000 | -     | 500 | -     | 400 | -   | 333 | -     | 280 | -   | 250 | -     | 220 | -   | 200 | -     | 180 | -   | 166 | -   | 142 |      |
|            | 500  | -     | 250 | -     | 200 | -   | 166 | -     | 140 | -   | 125 | -     | 110 | -   | 100 | -     | 90  | -   | 83  | -   | 71  |      |

Los pesos son aproximados y sin considerar motor.

Rendimiento aproximado 0,98%

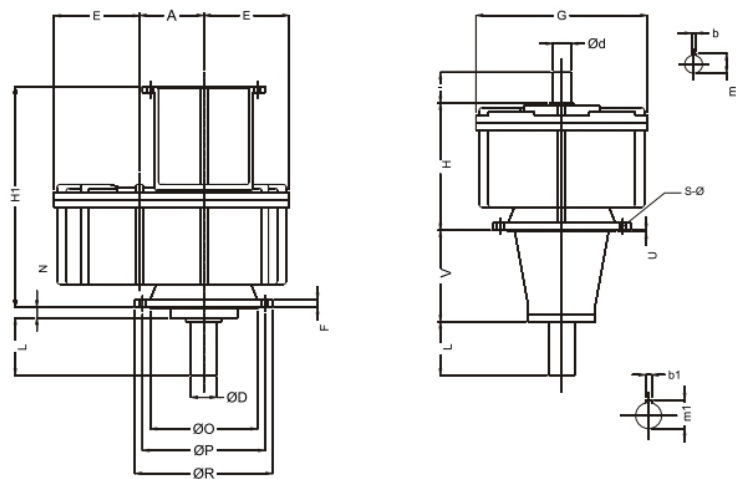
LT= Lite Térmico

RE= Mod. Rectificado

# ENGRANAJES

## MODELO DTV

Reductor coaxial de doble tren de engranajes helicoidales de disposición vertical.



| Modelo | Eje de entrada |     |    |      | Eje de salida |     |    |       | Anclaje |     |     |    |   |      | Cotas Generales |     |     |     |      |     |     |     | Peso |
|--------|----------------|-----|----|------|---------------|-----|----|-------|---------|-----|-----|----|---|------|-----------------|-----|-----|-----|------|-----|-----|-----|------|
| DTV-RE | Ød             | I   | b  | m    | ØD            | L   | b1 | m1    | ØO      | ØP  | ØR  | F  | U | S-Ø  | A               | E   | G   | H   | H1   | N   | V   | Kg. |      |
| 210    | 40             | 110 | 12 | 43,2 | 85            | 170 | 22 | 90,6  | 350     | 400 | 450 | 25 | 4 | 8-18 | 210             | 280 | 560 | 507 | 760  | 100 | 305 | 390 |      |
| 240    | 50             | 110 | 14 | 53,6 | 100           | 170 | 28 | 106,2 | 350     | 400 | 450 | 25 | 4 | 8-18 | 240             | 290 | 580 | 520 | 780  | 100 | 305 | 470 |      |
| 280    | 60             | 140 | 18 | 64,3 | 105           | 170 | 28 | 111,2 | 550     | 600 | 660 | 30 | 5 | 8-22 | 280             | 325 | 650 | 590 | 905  | 130 | 500 | 580 |      |
| 320    | 60             | 140 | 18 | 64,3 | 115           | 200 | 32 | 122,1 | 550     | 600 | 660 | 30 | 5 | 8-22 | 320             | 360 | 720 | 625 | 940  | 125 | 500 | 750 |      |
| 360    | 80             | 170 | 22 | 85,6 | 145           | 260 | 36 | 152,9 | 660     | 800 | 880 | 30 | 5 | 8-27 | 360             | 420 | 840 | 645 | 1020 | 130 | 700 | 950 |      |

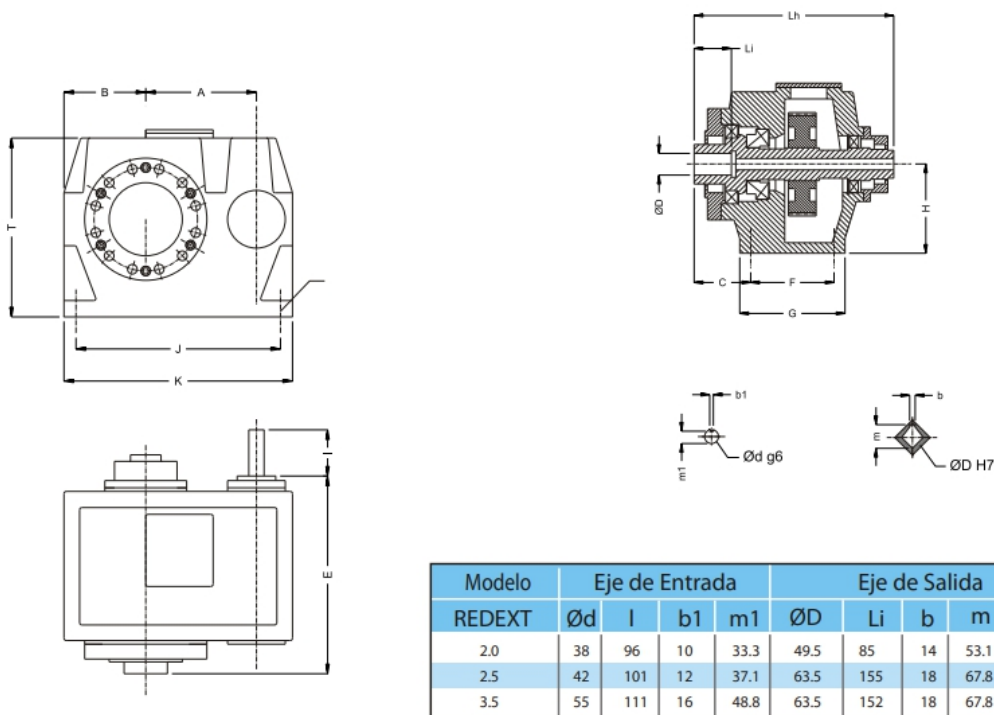
| Relaciones |      | 1:10 |     | 1:15 |     | 1:17 |    | 1:20 |    | 1:25 |    | 1:30 |    | 1:30 |    | 1:40 |    | LT  |
|------------|------|------|-----|------|-----|------|----|------|----|------|----|------|----|------|----|------|----|-----|
| Modelo     | RPM  | HP   | S   | HP   | S   | HP   | S  | HP   | S  | HP   | S  | HP   | S  | HP   | S  | HP   | S  | HP  |
| 210        | 1500 | 140  | 150 | 121  | 100 | 107  | 88 | 90   | 75 | 78   | 60 | 55   | 50 | -    | 42 | -    | 37 | 174 |
|            | 1000 | 111  | 100 | 87   | 66  | 80   | 58 | 68   | 50 | 50   | 40 | 39   | 33 | -    | 28 | -    | 25 |     |
|            | 500  | 69   | 50  | 47   | 33  | 43   | 29 | 36   | 25 | 26   | 20 | 20   | 16 | -    | 14 | -    | 12 |     |
| 240        | 1500 | 215  | 150 | 185  | 100 | 164  | 88 | 135  | 75 | 97   | 60 | 77   | 50 | -    | 42 | -    | 37 | 228 |
|            | 1000 | 174  | 100 | 135  | 66  | 118  | 58 | 94   | 50 | 68   | 40 | 54   | 33 | -    | 28 | -    | 25 |     |
|            | 500  | 110  | 50  | 74   | 33  | 66   | 29 | 50   | 25 | 36   | 20 | 29   | 16 | -    | 14 | -    | 12 |     |
| 280        | 1500 | 269  | 150 | 242  | 100 | 213  | 88 | 171  | 75 | 137  | 60 | 118  | 50 | -    | 42 | -    | 37 | 312 |
|            | 1000 | 242  | 100 | 179  | 66  | 157  | 58 | 122  | 50 | 101  | 40 | 84   | 33 | -    | 28 | -    | 25 |     |
|            | 500  | 145  | 50  | 101  | 33  | 88   | 29 | 67   | 25 | 54   | 20 | 44   | 16 | -    | 14 | -    | 12 |     |
| 320        | 1500 | 344  | 150 | 276  | 100 | 253  | 88 | 218  | 75 | 179  | 60 | 155  | 50 | -    | 42 | -    | 37 | 408 |
|            | 1000 | 287  | 100 | 212  | 66  | 14   | 58 | 168  | 50 | 127  | 40 | 110  | 33 | -    | 28 | -    | 25 |     |
|            | 500  | 190  | 50  | 118  | 33  | 107  | 29 | 90   | 25 | 69   | 20 | 58   | 16 | -    | 14 | -    | 12 |     |
| 360        | 1500 | 470  | 150 | 430  | 100 | 388  | 88 | 325  | 75 | 270  | 60 | 237  | 50 | -    | 42 | -    | 37 | 480 |
|            | 1000 | 397  | 100 | 337  | 66  | 307  | 58 | 262  | 50 | 195  | 40 | 168  | 33 | -    | 28 | -    | 25 |     |
|            | 500  | 270  | 50  | 190  | 33  | 172  | 29 | 145  | 25 | 106  | 20 | 89   | 16 | -    | 14 | -    | 12 |     |

Los pesos son aproximados y sin considerar motor.  
Rendimiento Aproximado 96%  
LT=Límite Térmico  
RE= Mod. Rectificado

# ENGRANAJES

## MODELO REDEXT

A engranajes. Especiales para sistemas de extrusión.



| Modelo | Brida de Encastre |     |     |        | Cotas Generales |     |     |     | Cotas de Anclaje |     |     |     |     |     |       |     |
|--------|-------------------|-----|-----|--------|-----------------|-----|-----|-----|------------------|-----|-----|-----|-----|-----|-------|-----|
|        | Ø-P               | Ø-M | Ø-N | ZxRM   | H               | T   | A   | B   | J                | K   | F   | G   | C   | C1  | Zx-Ø  | E   |
| 2.0    | 254               | 215 | 152 | 12xM20 | 203             | 390 | 230 | 170 | 452              | 475 | 190 | 240 | 129 | 99  | 04-27 | 420 |
| 2.5    | 392               | 305 | 222 | 12xM20 | 235             | 530 | 317 | 220 | 559              | 635 | 280 | 370 | 172 | 115 | 04-27 | 560 |
| 3.5    | 425               | 368 | 260 | 12xM24 | 336             | 640 | 430 | 300 | 762              | 850 | 380 | 520 | 190 | 203 | 04-27 | 710 |

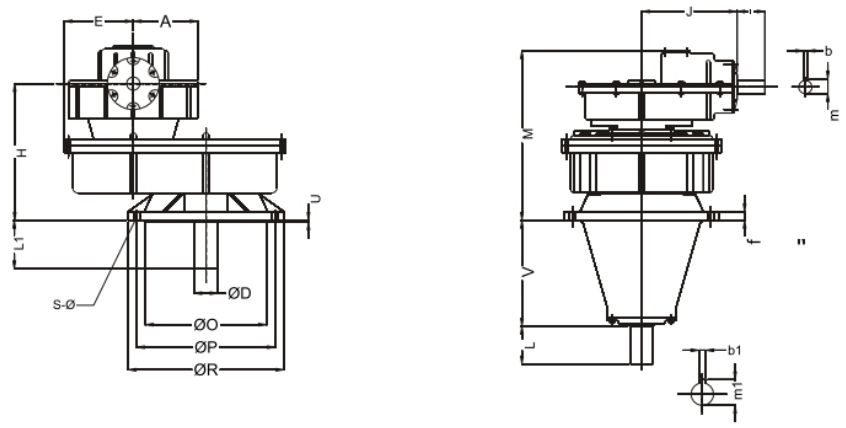
| Modelo | Potencia | Relación | Rodamiento | Lubric. | Peso |
|--------|----------|----------|------------|---------|------|
| REDEXT | 1500 rpm | i        | Crapodina  | Litros  | Kgs. |
| 2.0    | 50 HP    | 01:07    | 29415      | 12      | 210  |
| 2.0    | 42 HP    | 01:10    | 29415      | 12      | 210  |
| 2.0    | 42 HP    | 01:14    | 29415      | 12      | 210  |
| 2.5    | 130 HP   | 01:10    | 29424      | 20      | 510  |
| 2.5    | 100 HP   | 01:14    | 29424      | 20      | 510  |
| 3.5    | 190 HP   | 01:10    | 29430      | 60      | 1000 |
| 3.5    | 160 HP   | 01:14    | 29430      | 60      | 1000 |

Relación STD 1:14 Consultar por otras relaciones.  
Para este tipo de reductor es aconsejable considerar un intercambiador de calor.  
Los pesos y la cantidad de lubricante de los reductores son aproximados.  
Rogamos pedir certificación de las medidas actualizadas de los equipos.

# ENGRANAJES

## MODELO STCV

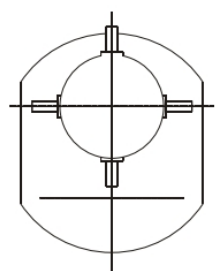
Especial para agitación opcional. Mando compuesto por Motor, Turbomotor, pos 20, Juego de Poleas y bastidor con registro para tensado de correas.



| Modelo   | Eje de entrada |     |    |      | Eje de salida |     |     |       | Anclaje |     |     |    |   |      | Cotas Generales |     |     |     |     |     | Peso |
|----------|----------------|-----|----|------|---------------|-----|-----|-------|---------|-----|-----|----|---|------|-----------------|-----|-----|-----|-----|-----|------|
| STCV/STV | Ød             | I   | b  | m    | ØD            | L   | b1  | m1    | ØO      | ØP  | ØR  | F  | U | S-Ø  | A               | E   | J   | M   | H   | V   | Kg.  |
| 2/180    | 38             | 80  | 12 | 41.2 | 60            | 140 | 90  | 64.3  | 350     | 400 | 450 | 25 | 4 | 8-18 | 180             | 230 | 275 | 500 | 385 | 298 | 340  |
| 2/210    | 38             | 80  | 12 | 41.2 | 70            | 140 | 95  | 74.7  | 350     | 400 | 450 | 25 | 4 | 8-18 | 210             | 280 | 275 | 510 | 395 | 298 | 500  |
| 3/240    | 50             | 100 | 16 | 53.9 | 80            | 170 | 131 | 85.6  | 350     | 400 | 450 | 25 | 4 | 8-18 | 240             | 295 | 347 | 620 | 475 | 298 | 640  |
| 3/280    | 50             | 100 | 16 | 53.9 | 100           | 180 | 133 | 106.2 | 550     | 600 | 660 | 30 | 4 | 8-22 | 280             | 325 | 347 | 660 | 513 | 500 | 730  |
| 4/320    | 65             | 120 | 18 | 69.3 | 110           | 200 | 146 | 117.1 | 550     | 600 | 660 | 30 | 4 | 8-22 | 320             | 360 | 450 | 730 | 563 | 500 | 910  |
| 4/360    | 65             | 120 | 18 | 69.3 | 125           | 225 | 161 | 132.1 | 660     | 800 | 880 | 30 | 4 | 8-27 | 360             | 480 | 450 | 760 | 610 | 700 | 1200 |

| Relaciones |      | 1:12 |     | 1:15 |     | 1:17 |    | 1:20 |    | 1:22 |    | 1:25 |    | 1:30 |    | LT  |
|------------|------|------|-----|------|-----|------|----|------|----|------|----|------|----|------|----|-----|
| Modelo     | RPM  | HP   | S   | HP   | S   | HP   | S  | HP   | S  | HP   | S  | HP   | S  | HP   | S  | HP  |
| 2/180      | 1500 | 28   | 125 | 22   | 100 | 20   | 88 | 18   | 75 | 17   | 68 | 15   | 60 | 12   | 50 | 76  |
|            | 1000 | 20   | 83  | 15   | 66  | 16   | 58 | 13   | 50 | 12   | 45 | 10   | 40 | 8    | 33 |     |
|            | 500  | 12   | 42  | 10   | 33  | 9    | 29 | 7    | 25 | 6.5  | 22 | 5.5  | 20 | 4    | 16 |     |
| 2/210      | 1500 | 33   | 125 | 29   | 100 | 26   | 88 | 23   | 75 | 21   | 68 | 19   | 60 | 16   | 50 | 96  |
|            | 1000 | 24   | 83  | 20   | 66  | 17   | 58 | 15   | 50 | 14   | 45 | 13   | 40 | 11   | 33 |     |
|            | 500  | 13   | 42  | 12   | 33  | 9    | 29 | 8    | 25 | 7.5  | 22 | 7    | 20 | 6    | 16 |     |
| 3/240      | 1500 | 58   | 125 | 46   | 100 | 42   | 88 | 36   | 75 | 32   | 68 | 28   | 60 | 24   | 50 | 120 |
|            | 1000 | 40   | 83  | 31   | 66  | 29   | 58 | 24   | 50 | 21   | 45 | 18   | 40 | 16   | 33 |     |
|            | 500  | 21   | 42  | 17   | 33  | 16   | 29 | 13   | 25 | 11   | 22 | 10   | 20 | 9    | 16 |     |
| 3/280      | 1500 | 71   | 125 | 63   | 100 | 60   | 88 | 52   | 75 | 46   | 68 | 42   | 60 | 33   | 50 | 144 |
|            | 1000 | 53   | 83  | 45   | 66  | 42   | 58 | 37   | 50 | 31   | 45 | 29   | 40 | 24   | 33 |     |
|            | 500  | 29   | 42  | 25   | 33  | 23   | 29 | 20   | 25 | 17   | 22 | 16   | 20 | 13   | 16 |     |
| 4/320      | 1500 | 103  | 125 | 95   | 100 | 89   | 88 | 81   | 75 | 71   | 68 | 66   | 60 | 50   | 50 | 176 |
|            | 1000 | 75   | 83  | 71   | 66  | 65   | 58 | 59   | 50 | 52   | 45 | 47   | 40 | 36   | 33 |     |
|            | 500  | 40   | 42  | 39   | 33  | 34   | 29 | 33   | 25 | 28   | 22 | 25   | 20 | 19   | 16 |     |
| 4/360      | 1500 | -    | 125 | 132  | 100 | 123  | 88 | 113  | 75 | 96   | 68 | 86   | 60 | 70   | 50 | 208 |
|            | 1000 | -    | 83  | 97   | 66  | 90   | 58 | 83   | 50 | 70   | 45 | 62   | 40 | 50   | 33 |     |
|            | 500  | -    | 42  | 50   | 33  | 47   | 29 | 43   | 25 | 36   | 22 | 32   | 20 | 26   | 16 |     |

Los pesos son aproximados y sin considerar motor.  
Rendimiento Aproximado 96%



POSICIONES DE MONTAJE

En los casos en que la potencia del equipo supere el límite térmico, será necesario el agregado de un intercambiador de calor, como así también un sistema de lubricación forzada. Consultar con nuestro dpto. técnico.

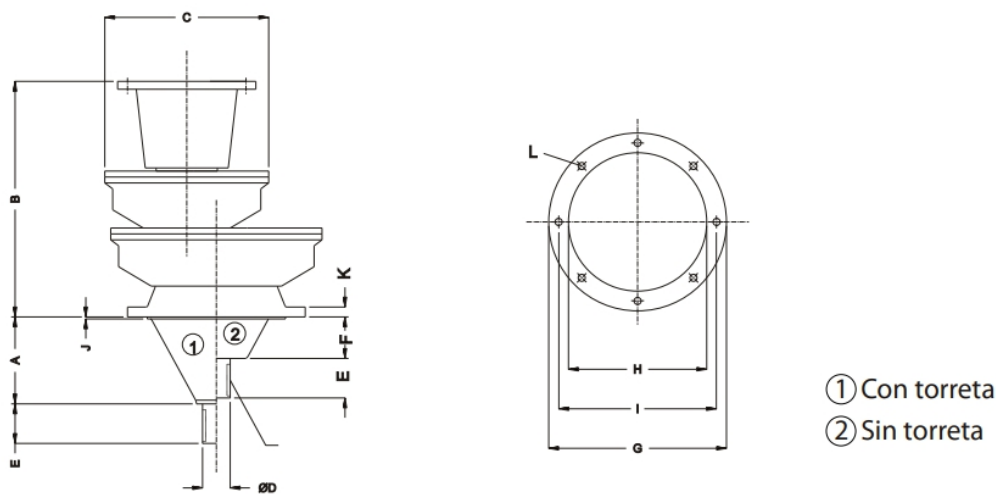
Los pesos son aproximados sin considerar motor.  
Rendimiento aproximado 0,96%  
LT= Límite Térmico  
RE= Mod. Rectificado



# ENGRANAJES

## MODELO PL

Modelo para agitación con sistema planetario

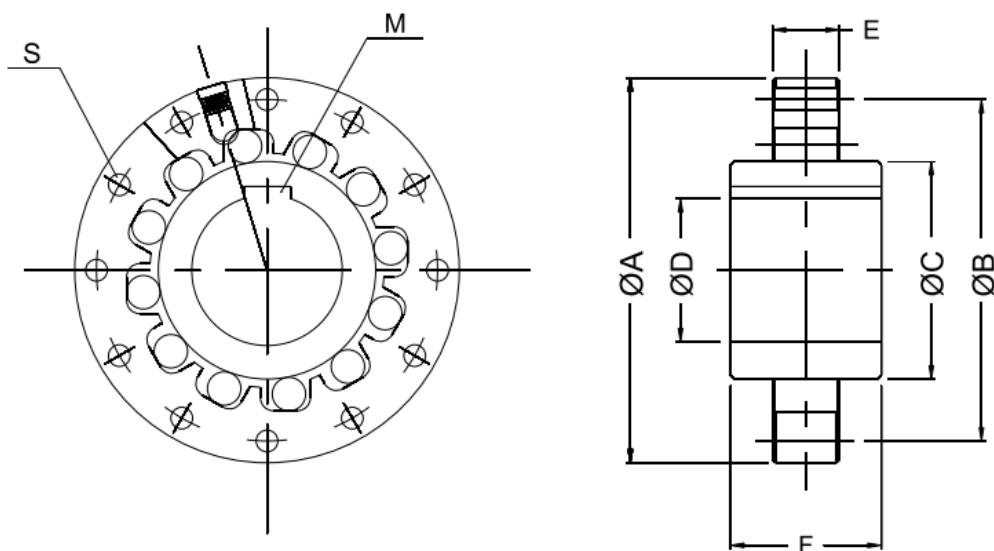


| PL  | Eje de Salida |     |         | Anclaje |     |     |       |    |   | Anclaje MH |     |      |     | Peso |
|-----|---------------|-----|---------|---------|-----|-----|-------|----|---|------------|-----|------|-----|------|
| TAM | Ød            | L   | M       | ØG      | ØH  | ØI  | L     | K  | J | A          | B   | C    | F   | Kg   |
| 21  | 60            | 140 | 18x6,8  | 450     | 350 | 400 | 08-18 | 20 | 5 | 300        | 460 | 410  | 75  | 200  |
| 24  | 75            | 140 | 20x7,4  | 450     | 350 | 400 | 08-18 | 25 | 5 | 300        | 596 | 515  | 95  | 290  |
| 28  | 85            | 170 | 22x8,5  | 550     | 450 | 500 | 08-18 | 25 | 5 | 405        | 634 | 648  | 105 | 360  |
| 32  | 110           | 200 | 32x11,1 | 660     | 550 | 600 | 08-22 | 30 | 5 | 500        | 660 | 760  | 125 | 410  |
| 36  | 135           | 250 | 36x12,3 | 800     | 650 | 725 | 08-24 | 35 | 5 | 600        | 810 | 1100 | 170 | 700  |

| Relaciones |      | 1:16      |    | 1:20 |      | 1:24 |    | 1:28 |    | 1:32 |    | 1:40 |    | HP MAX. |
|------------|------|-----------|----|------|------|------|----|------|----|------|----|------|----|---------|
| TAM        | RPM  | HP        | S  | HP   | S    | HP   | S  | HP   | S  | HP   | S  | HP   | S  | Motor   |
| 21         | 1500 | 18        | 90 | 15   | 72.5 | 13   | 60 | 11   | 52 | 10   | 45 | 8.5  | 36 | 12.5    |
|            | 1000 | 13        | 60 | 11   | 48   | 9    | 40 | 8    | 34 | 7    | 30 | 6    | 24 | 7.5     |
| 24         | 1500 | 39        | 90 | 33   | 72.5 | 28   | 60 | 25   | 52 | 22   | 45 | 18   | 36 | 20      |
|            | 1000 | 28        | 60 | 23   | 48   | 20   | 40 | 17.5 | 34 | 15.5 | 30 | 12.5 | 24 | 15      |
| 28         | 1500 | 67        | 90 | 58   | 72.5 | 50   | 60 | 45   | 52 | 40   | 45 | 33   | 36 | 30      |
|            | 1000 | 50        | 60 | 42.5 | 48   | 36   | 40 | 32   | 34 | 28.5 | 30 | 23   | 24 | 20      |
| 32         | 1500 | 107       | 90 | 93   | 72.5 | 81   | 60 | 72   | 52 | 65   | 45 | 60   | 36 | 60      |
|            | 1000 | 81        | 60 | 69   | 48   | 59.5 | 40 | 52   | 34 | 47   | 30 | 38   | 24 | 40      |
| 36         | 1500 | CONSULTAR |    |      |      |      |    |      |    |      |    |      |    |         |
|            | 1000 | CONSULTAR |    |      |      |      |    |      |    |      |    |      |    |         |

Los pesos son aproximados  
Rendimiento aproximado 0,98%  
LT= Límite Térmico  
RE= Mod. Rectificado

MODELO FRENO

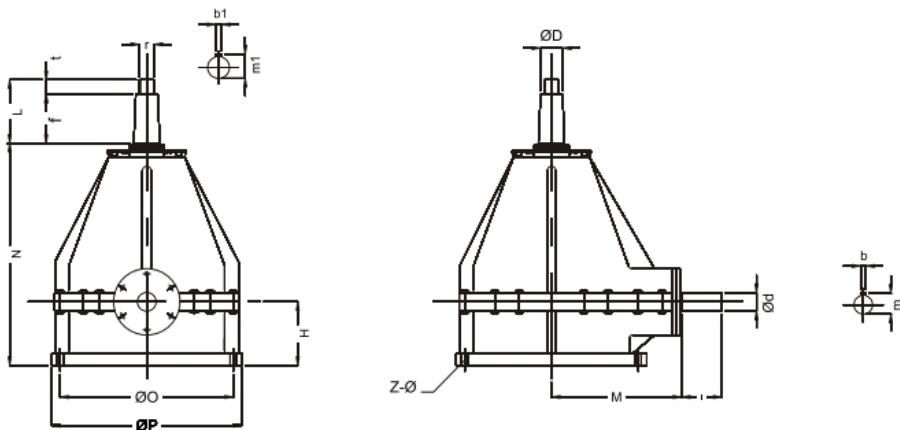


| Modelo | Cotas Generales |          |     |     |     |    |    |    |           | Par en Max.<br>kgm. |
|--------|-----------------|----------|-----|-----|-----|----|----|----|-----------|---------------------|
| FA     | Ød              | M        | ØA  | ØB  | ØC  | E  | F  | G  | S         |                     |
| 42     | 28              | 8 x 3    | 75  | 65  | 42  | 15 | 45 | 60 | 5 - 5,25  | 7                   |
| 55     | 35              | 10 x 3,4 | 95  | 85  | 55  | 17 | 45 | 34 | 6 - 6,5   | 14                  |
| 65     | 40              | 12 x 3,2 | 115 | 102 | 65  | 20 | 55 | 40 | 12 - 6,5  | 25                  |
| 75     | 55              | 16 x 3,9 | 125 | 111 | 75  | 21 | 52 | 42 | 12 - 8,5  | 36                  |
| 102    | 70              | 20 x 4,7 | 170 | 155 | 102 | 32 | 80 | 64 | 12 - 10,5 | 72                  |

Nota: Las cotas D y F, varían según modelos de equipos requeridos.

MODELO TE 2,3,4

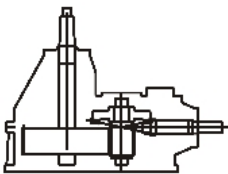
Especial para torres de enfriamiento.  
Reductor de simple tren de engranajes cónicos, de disposición ortogonal con salida vertical hacia arriba.



Cabos de eje normalizados 8DIN 42672). Ajuste ISA g6

| Modelo | Eje de entrada |     |    |      | Eje de salida con Cabo Cónico |     |    |       |     |        |          |         | Peso | Lubr. |
|--------|----------------|-----|----|------|-------------------------------|-----|----|-------|-----|--------|----------|---------|------|-------|
| TE     | Ød             | l   | b  | m    | ØD                            | L   | b1 | m1    | f   | Angulo | Roscar r | Largo t | Kg.  | Lts.  |
| TE-2   | 38             | 80  | 12 | 41.2 | 60                            | 145 | 18 | 64.3  | 110 | 2° 23' | M30x1,5  | 35      | 152  | 6.5   |
| TE-3   | 50             | 100 | 16 | 53.9 | 75                            | 185 | 22 | 80.6  | 140 | 2° 23' | M40x1,5  | 45      | 290  | 10    |
| TE-4   | 65             | 140 | 18 | 69.3 | 90                            | 220 | 25 | 95.4  | 170 | 2° 23' | M50x1,5  | 50      | 410  | 25    |
| TE-5   | 70             | 140 | 20 | 74.7 | 100                           | 240 | 28 | 106.2 | 170 | 2° 23' | M60x2    | 60      | 680  | 45    |

| Modelo | Anclaje |           |     | Generales |     |     |
|--------|---------|-----------|-----|-----------|-----|-----|
|        | TE      | O         | P   | ZØ        | H   | C   |
| TE-2   |         | 350       | 400 | 08-18     | 163 | 573 |
| TE-3   |         | 500       | 550 | 08-18     | 175 | 650 |
| TE-4   |         | 600       | 640 | 08-18     | 220 | 770 |
| TE-5   |         | CONSULTAR |     |           | 370 | 750 |



Forma Constructiva TE 5/6/7

FORMA CONSTRUCTIVA TE-5  
Se contruye con 1º tren de juego cónico espiral y 2º tren de engranajes cilíndricos helicoidales.

La cantidad de lubricante es indicativa y está referida a la relación más alta, en otras consultar.  
Los pesos son aproximados y sin considerar lubricante.  
Rendimiento aproximado 0,98%  
LT= Límite Térmico  
RE= Mod. Rectificado  
Las cotas d,l,b y m, pueden variar según la relación elegida.  
Consultar con nuestro Departamento Técnico.

## MODELO TE 2,3,4

TABLA DE POTENCIAS (motores fs=2)

| MOTORES 1500 RPM |           |        |        |     |        |        |       |        |        |        |           |        |        |
|------------------|-----------|--------|--------|-----|--------|--------|-------|--------|--------|--------|-----------|--------|--------|
| Relación         | 1:90      | 1:1,93 | 1:2,30 | 1:3 | 1:3,12 | 1:3,35 | 1:3,6 | 1:4,22 | 1:4,44 | 1:4,71 | 1:4,75    | 1:5,57 | 1:5,71 |
| RPM              | 790       | 777    | 652    | 500 | 480    | 447    | 416   | 355    | 337    | 318    | 315       | 269    | 262    |
| TE-2             | 50        | -      | 40     | 30  | -      | 35     | 32    | -      | -      | -      | 30        | -      | -      |
| TE-3             | -         | -      | -      | -   | 45     | 50     | -     | -      | 90     | 50     | -         | 60     | 45     |
| TE-4             | -         | -      | -      | -   | -      | -      | -     | 140    | -      | -      | -         | 110    | -      |
| TE-5             | CONSULTAR |        |        |     |        |        |       |        |        | 237    | CONSULTAR |        |        |

| MOTORES 1000 RPM |           |        |        |     |        |        |       |        |        |        |        |        |        |
|------------------|-----------|--------|--------|-----|--------|--------|-------|--------|--------|--------|--------|--------|--------|
| Relación         | 1:90      | 1:1,93 | 1:2,30 | 1:3 | 1:3,12 | 1:3,35 | 1:3,6 | 1:4,22 | 1:4,44 | 1:4,71 | 1:4,75 | 1:5,57 | 1:5,71 |
| RPM              | 790       | 777    | 652    | 500 | 480    | 447    | 416   | 355    | 337    | 318    | 315    | 269    | 262    |
| TE-2             | 35        | -      | 25     | 20  | -      | -      | 15    | -      | -      | -      | 15     | -      | -      |
| TE-3             | -         | -      | -      | -   | 30     | 35     | -     | -      | 40     | 35     | -      | 40     | 30     |
| TE-4             | -         | -      | -      | -   | -      | -      | -     | 75     | -      | -      | -      | 50     | -      |
| TE-5             | CONSULTAR |        |        |     |        |        |       |        |        |        |        |        |        |

Los pesos son paroximados y sin considerar lubricante.

Rendimiento aproximado 0,98%

LT= Límite Térmico

RE= Mod. Rectificado

Las presentes potencias y relaciones con sus consiguientes rpm de salida, son indicativas y de fabricación STD.

Por otras intermedias consultar a nuestro Dpto. Técnico.

OPCIONALES

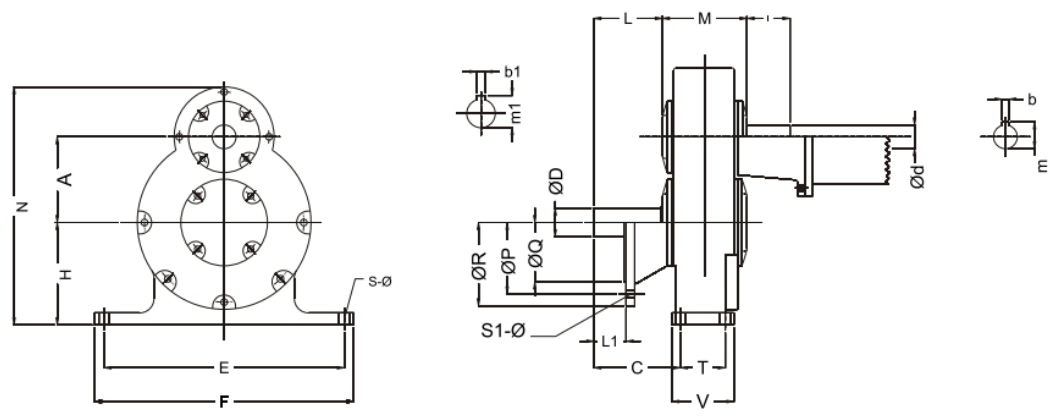
Mando completo compuesto por motor, junta universal, reductor, protección cardánica y bastidor conjunto.



# ENGRANAJES

## MODELO STL

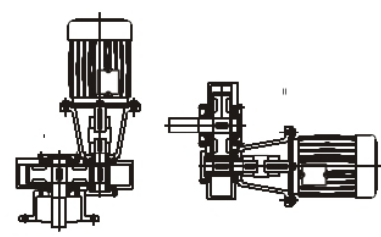
Reductor de simple tren de engranajes helicoidales de disposición paralela de ejes superpuestos.



| Modelo | Eje de entrada |    |    |      | Eje de salida |     |    |    |      | Anclaje Rectangular |     |     |     |     |       | Anclaje Circular |     |     |       | Cotas Generales |     |     |     | Peso |
|--------|----------------|----|----|------|---------------|-----|----|----|------|---------------------|-----|-----|-----|-----|-------|------------------|-----|-----|-------|-----------------|-----|-----|-----|------|
| STL    | Ød             | I  | b  | m    | ØD            | L   | L1 | b1 | m1   | E                   | F   | T   | V   | C   | S x Ø | ØQ               | ØP  | ØR  | S1xØ  | A               | H   | N   | M   | Kg.  |
| 60     | 17             | 40 | 6  | 19,6 | 20            | 45  | 30 | 6  | 22,6 | 180                 | 200 | 40  | 60  | 79  | 04-10 | 110              | 130 | 160 | 04-09 | 60              | 85  | 200 | 108 | 13   |
| 75     | 20             | 45 | 6  | 22,6 | 25            | 50  | 35 | 8  | 28   | 190                 | 220 | 40  | 70  | 93  | 04-14 | 110              | 130 | 160 | 04-11 | 75              | 110 | 246 | 125 | 21   |
| 90     | 35             | 80 | 10 | 38,4 | 40            | 85  | 40 | 12 | 43,2 | 270                 | 300 | 100 | 130 | 102 | 04-14 | 130              | 165 | 200 | 04-14 | 90              | 124 | 290 | 134 | 40   |
| 120    | 40             | 85 | 12 | 43,2 | 50            | 110 | 50 | 16 | 53,9 | 310                 | 350 | 80  | 110 | 150 | 04-17 | 180              | 215 | 250 | 04-14 | 120             | 152 | 352 | 150 | 68   |
| 150    | 40             | 85 | 12 | 43,2 | 55            | 110 | 50 | 16 | 58,9 | 420                 | 460 | 90  | 120 | 147 | 04-17 | 230              | 265 | 300 | 04-14 | 150             | 179 | 420 | 164 | 86   |
| 180    | 45             | 90 | 14 | 48,6 | 60            | 140 | 70 | 18 | 64,3 | 505                 | 545 | 94  | 130 | 182 | 04-22 | 250              | 300 | 350 | 04-17 | 180             | 215 | 500 | 178 | 100  |

| Relaciones |      | 1:1,5 |      | 1:2 |     | 1:2,5 |     | 1:3 |     | 1:3,5 |     |
|------------|------|-------|------|-----|-----|-------|-----|-----|-----|-------|-----|
| Modelo     | RPM  | HP    | S    | HP  | S   | HP    | S   | HP  | S   | HP    | S   |
| 60         | 1500 | 15    | 1000 | 12  | 750 | 9     | 600 | 6,5 | 500 | 4,5   | 428 |
|            | 1000 | 10    | 666  | 8   | 500 | 46    | 400 | 4,5 | 333 | 3     | 274 |
| 75         | 1500 | 28    | 1000 | 20  | 750 | 15    | 600 | 11  | 500 | 9     | 428 |
|            | 1000 | 18    | 666  | 13  | 500 | 10    | 400 | 7,5 | 333 | 6     | 274 |
| 90         | 1500 | -     | 1000 | 34  | 750 | 27    | 600 | 23  | 500 | 15    | 428 |
|            | 1000 | -     | 666  | 23  | 500 | 18    | 400 | 15  | 333 | 11    | 274 |
| 120        | 1500 | -     | 1000 | 58  | 750 | 32    | 600 | 42  | 500 | 32    | 428 |
|            | 1000 | -     | 666  | 39  | 500 | -     | 400 | 28  | 333 | 22    | 274 |
| 150        | 1500 | -     | 1000 | -   | 750 | -     | 600 | 50  | 500 | 42    | 428 |
|            | 1000 | -     | 666  | -   | 500 | -     | 400 | 32  | 333 | 28    | 274 |
| 180        | 1500 | -     | 1000 | -   | 750 | -     | 600 | 70  | 500 | 66    | 428 |
|            | 1000 | -     | 666  | -   | 500 | -     | 400 | 46  | 333 | 44    | 274 |

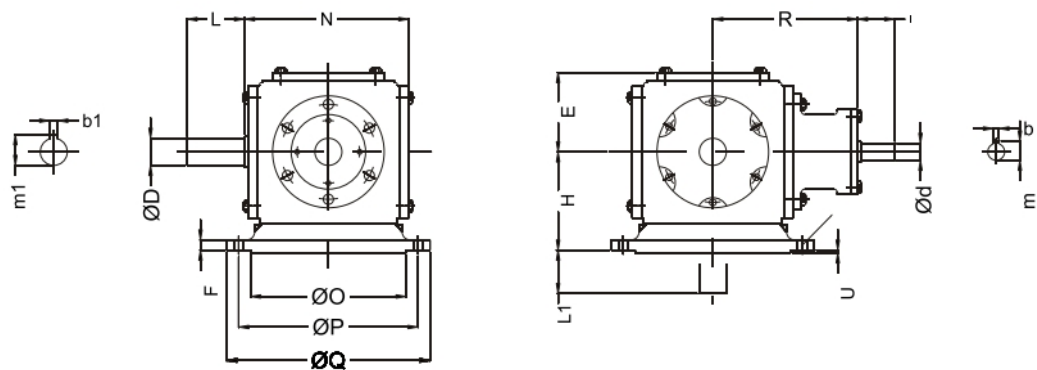
Los pesos son aproximados y sin considerar motor.  
Rendimiento Aproximado 98%  
S=RPM de salida



POSICIONES DE MONTAJE

MODELO STC

Reductor de simple tren cónico de disposición ortogonal.

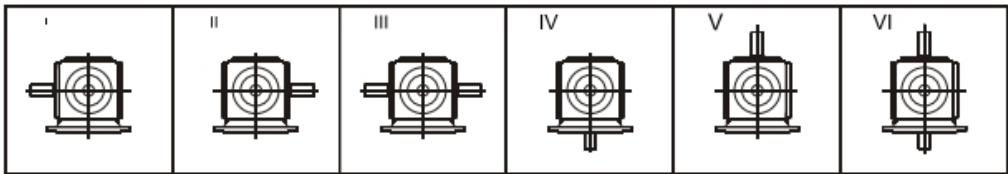


| Modelo | Eje de entrada |     |    |      | Eje de salida |     |     |    |      | Anclaje |     |     |   |    |      | Cotas Generales |     |     |     |     |
|--------|----------------|-----|----|------|---------------|-----|-----|----|------|---------|-----|-----|---|----|------|-----------------|-----|-----|-----|-----|
| STC    | Ød             | I   | b  | m    | ØD            | L   | L1  | b1 | m1   | ØO      | ØP  | ØQ  | U | F  | S    | R               | E   | N   | H   | Kg. |
| 1      | 25             | 50  | 8  | 28   | 40            | 85  | 80  | 12 | 43,2 | 230     | 265 | 300 | 4 | 15 | 4-14 | 200             | 120 | 238 | 145 | 40  |
| 2      | 40             | 85  | 12 | 43,2 | 60            | 140 | 120 | 18 | 64,3 | 300     | 350 | 400 | 4 | 18 | 4-18 | 300             | 170 | 352 | 200 | 150 |
| 3      | 65             | 140 | 20 | 69,7 | 90            | 170 | 160 | 25 | 95,4 | 550     | 600 | 660 | 5 | 30 | 8-22 | 400             | 295 | 435 | 285 | 400 |

Nota:

Estos modelos se los puede construir con torreta inferior  
Cota R: Indicativa pudiendose modificar según la relación requerida.  
Consulte con nuestro Dto. Técnico

POSICIONES DE MONTAJE



Esta caja se la puede utilizar como desviadora ortogonal o como reductor, en relaciones 1:1 hasta 1:5 cuyo rango de potencia varía desde 5 HP hasta 100 HP. Están contruidos con engranajes cónicos curvo espiral o con cónicos rectos inclinados a elección según los esfuerzos en juego, relaciones, velocidad y potencia solicitada.

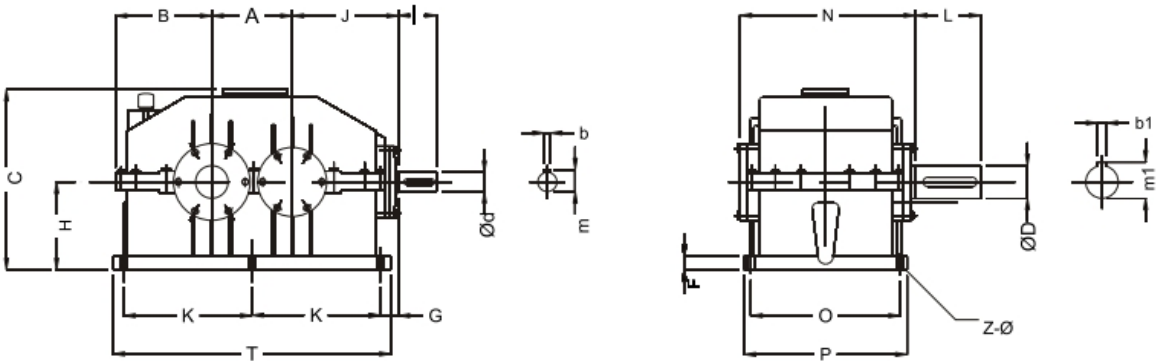
Rendimiento aproximado 96%.

Para la selección del tamaño adecuado rogamos consultar con nuestro Dto. Técnico.

# ENGRANAJES

## MODELO DTCC

Reductor de doble tren de engranajes de disposición ortogonal.



| Modelo  | Eje de Entrada |     |    |      | Cotas de Anclaje |     |     |      |    |      | Cotas Generales |     |     |
|---------|----------------|-----|----|------|------------------|-----|-----|------|----|------|-----------------|-----|-----|
| DTCC-RE | Ød             | I   | b  | m    | O                | P   | K   | T    | F  | Z-Ø  | A               | B   | J   |
| 140     | 28             | 55  | 8  | 31   | 238              | 270 | 240 | 520  | 25 | 6-17 | 140             | 195 | 220 |
| 160     | 38             | 80  | 12 | 41,2 | 313              | 345 | 270 | 585  | 30 | 6-17 | 160             | 215 | 275 |
| 180     | 38             | 80  | 12 | 41,2 | 330              | 365 | 290 | 620  | 30 | 6-17 | 180             | 200 | 275 |
| 210     | 50             | 100 | 16 | 53,9 | 390              | 425 | 335 | 726  | 35 | 6-17 | 210             | 258 | 347 |
| 240     | 50             | 100 | 16 | 53,9 | 410              | 450 | 380 | 815  | 35 | 6-17 | 240             | 295 | 347 |
| 280     | 65             | 140 | 18 | 69,3 | 450              | 495 | 430 | 920  | 35 | 6-20 | 280             | 320 | 450 |
| 320     | 65             | 140 | 18 | 69,3 | 530              | 575 | 500 | 1076 | 40 | 6-23 | 320             | 378 | 450 |
| 360     | CONSULTAR      |     |    |      |                  |     |     |      |    |      |                 |     |     |

| Modelo  | Cotas Generales |     |     | Eje de Salida |     |    |       | Peso |
|---------|-----------------|-----|-----|---------------|-----|----|-------|------|
| DTCC-RE | H               | N   | C   | ØD            | L   | b1 | m1    | Kg.  |
| 140     | 171             | 290 | 350 | 50            | 110 | 16 | 53,9  | 132  |
| 160     | 200             | 372 | 415 | 60            | 140 | 18 | 64,3  | 200  |
| 180     | 235             | 383 | 440 | 75            | 140 | 22 | 80,6  | 230  |
| 210     | 229             | 446 | 470 | 85            | 170 | 25 | 90,4  | 375  |
| 240     | 276             | 480 | 535 | 100           | 180 | 28 | 106,2 | 475  |
| 280     | 303             | 495 | 610 | 105           | 190 | 28 | 111,2 | 605  |
| 320     | 355             | 620 | 725 | 115           | 210 | 32 | 122,1 | 935  |
| 360     | CONSULTAR       |     |     |               |     |    |       |      |

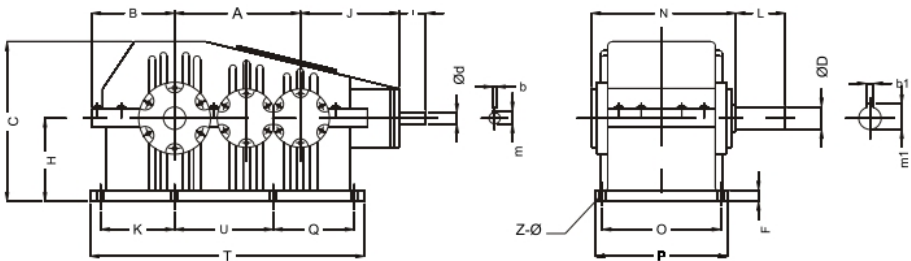
TABLA DE POTENCIAS (HP)

| Relación |          | 1:10  |     | 1:12  |     | 1:15  |     | 1:20  |     | 1:22  |     | 1:25  |    | 1:30  |    | LT  |
|----------|----------|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|----|-------|----|-----|
| Mod.     | Ent. RPM | RE HP | S   | RE HP | S   | RE HP | S   | RE HP | S   | RE HP | S   | RE HP | S  | RE HP | S  | HP  |
| 140      | 1500     | 28    | 150 | 28    | 125 | 28    | 100 | 28    | 75  | 25    | 68  | 18    | 60 | 15    | 50 | 29  |
|          | 1000     | 18    | 100 | 18    | 83  | 18    | 66  | 18    | 50  | 15    | 45  | 11    | 40 | 10    | 33 |     |
|          | 500      | 9     | 50  | 9     | 41  | 9     | 33  | 9     | 25  | 8     | 22  | 6     | 20 | 5     | 16 |     |
| 160      | 1500     | 75    | 150 | 60    | 125 | 51    | 100 | 43    | 75  | 39    | 68  | 33    | 60 | 25    | 50 | 40  |
|          | 1000     | 50    | 100 | 40    | 83  | 33    | 66  | 28    | 50  | 25    | 45  | 21    | 40 | 15    | 33 |     |
|          | 500      | 25    | 50  | 20    | 41  | 16    | 33  | 14    | 25  | 13    | 22  | 11    | 20 | 8     | 16 |     |
| 180      | 1500     | 85    | 150 | 64    | 125 | 60    | 100 | 53    | 75  | 51    | 68  | 44    | 60 | 35    | 50 | 59  |
|          | 1000     | 55    | 100 | 43    | 83  | 40    | 66  | 35    | 50  | 3     | 45  | 29    | 40 | 23    | 33 |     |
|          | 500      | 28    | 50  | 21    | 41  | 20    | 33  | 18    | 25  | 16    | 22  | 15    | 20 | 13    | 16 |     |
| 210      | 1500     | 181   | 150 | 158   | 125 | 118   | 100 | 94    | 75  | 81    | 68  | 75    | 60 | 60    | 50 | 86  |
|          | 1000     | 120   | 100 | 105   | 83  | 78    | 66  | 63    | 50  | 53    | 45  | 50    | 40 | 40    | 33 |     |
|          | 500      | 60    | 50  | 53    | 41  | 39    | 33  | 31    | 25  | 26    | 22  | 25    | 20 | 20    | 16 |     |
| 240      | 1500     | -     | 150 | 125   | 148 | 100   | 123 | 75    | 118 | 68    | 100 | 60    | 81 | 50    |    | 115 |
|          | 1000     | -     | 100 | 125   | 83  | 98    | 66  | 83    | 50  | 115   | 45  | 65    | 40 | 53    | 33 |     |
|          | 500      | -     | 50  | 63    | 41  | 49    | 33  | 40    | 25  | 39    | 25  | 33    | 20 | 26    | 16 |     |
| 280      | 1500     | -     | 150 | -     | 125 | 210   | 100 | 188   | 75  | 163   | 68  | 131   | 60 | 103   | 50 | 155 |
|          | 1000     | -     | 100 | -     | 83  | 140   | 66  | 125   | 50  | 108   | 45  | 88    | 40 | 68    | 33 |     |
|          | 500      | -     | 50  | -     | 41  | 70    | 33  | 63    | 25  | 54    | 22  | 44    | 20 | 34    | 16 |     |
| 320      | 1500     | -     | 150 | -     | 125 | -     | 100 | -     | 75  | -     | 68  | -     | 60 | -     | 50 | 206 |
|          | 1000     | -     | 100 | -     | 83  | -     | 66  | -     | 50  | -     | 45  | -     | 40 | -     | 33 |     |
|          | 500      | -     | 50  | -     | 41  | -     | 33  | -     | 25  | -     | 22  | -     | 20 | -     | 16 |     |
| 360      | 1500     | -     | 150 | -     | 125 | -     | 100 | -     | 75  | -     | 68  | -     | 60 | -     | 50 | 275 |
|          | 1000     | -     | 100 | -     | 83  | -     | 66  | -     | 50  | -     | 45  | -     | 40 | -     | 33 |     |
|          | 500      | -     | 50  | -     | 41  | -     | 33  | -     | 25  | -     | 22  | -     | 20 | -     | 16 |     |

# ENGRANAJES

## MODELO TTCC

Reductor de triple tren de engranajes de disposición ortogonal.

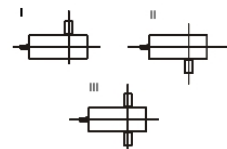


| Modelo  | Eje de entrada |     |    |      | Cotas de Anclaje |     |     |     |     |      |    |       | Cotas Generales |     |     |     |      |
|---------|----------------|-----|----|------|------------------|-----|-----|-----|-----|------|----|-------|-----------------|-----|-----|-----|------|
| TTCC-RE | Ød             | I   | b  | m    | O                | P   | K   | U   | Q   | T    | F  | Z-Ø   | A               | B   | J   | H   | C    |
| 280     | 25             | 60  | 8  | 28   | 265              | 295 | 165 | 220 | 180 | 612  | 25 | 08-14 | 280             | 185 | 220 | 185 | 355  |
| 320     | 30             | 63  | 8  | 33   | 295              | 325 | 190 | 250 | 220 | 700  | 25 | 08-14 | 320             | 210 | 220 | 200 | 400  |
| 370     | 38             | 80  | 12 | 41,2 | 315              | 350 | 230 | 290 | 250 | 830  | 30 | 08-17 | 370             | 255 | 275 | 245 | 460  |
| 420     | 38             | 80  | 12 | 41,2 | 335              | 375 | 250 | 330 | 270 | 900  | 30 | 08-17 | 420             | 275 | 275 | 270 | 500  |
| 490     | 38             | 80  | 12 | 41,2 | 355              | 405 | 290 | 385 | 295 | 1040 | 35 | 08-20 | 490             | 330 | 275 | 280 | 550  |
| 560     | 50             | 100 | 16 | 53,9 | 380              | 428 | 315 | 435 | 335 | 1150 | 35 | 08-20 | 560             | 345 | 350 | 330 | 630  |
| 640     | 70             | 125 | 20 | 74,7 | 405              | 450 | 385 | 500 | 355 | 1300 | 35 | 08-23 | 640             | 410 | 450 | 390 | 750  |
| 720     | 70             | 125 | 20 | 74,7 | 450              | 500 | 445 | 540 | 425 | 1470 | 40 | 08-23 | 720             | 475 | 450 | 430 | 845  |
| 810     | 65             | 140 | 18 | 69,3 | 480              | 532 | 485 | 630 | 445 | 1622 | 40 | 08-23 | 810             | 516 | 450 | 450 | 900  |
| 900     | 65             | 140 | 18 | 69,3 | 512              | 575 | 528 | 665 | 528 | 1785 | 40 | 08-26 | 900             | 550 | 450 | 520 | 1030 |
| 1050    | CONSULTAR      |     |    |      |                  |     |     |     |     |      |    |       |                 |     |     |     |      |

| Modelo  | Eje de Salida |     |    |       |     | Peso |
|---------|---------------|-----|----|-------|-----|------|
| TTCC-RE | Ød            | L   | b1 | m1    | N   | Kg   |
| 280     | 50            | 110 | 16 | 53,9  | 312 | 200  |
| 320     | 85            | 140 | 22 | 90,6  | 334 | 340  |
| 370     | 85            | 164 | 22 | 90,6  | 376 | 385  |
| 420     | 100           | 172 | 28 | 106,2 | 415 | 450  |
| 490     | 105           | 195 | 28 | 111,2 | 440 | 580  |
| 560     | 115           | 190 | 32 | 122,1 | 468 | 750  |
| 640     | 145           | 260 | 36 | 152,9 | 510 | 1010 |
| 720     | 160           | 275 | 40 | 168,7 | 540 | 1485 |
| 810     | 180           | 310 | 45 | 189,9 | 640 | 1870 |
| 900     | 200           | 310 | 45 | 209,9 | 710 | 2200 |
| 1050    | CONSULTAR     |     |    |       |     |      |

Los pesos son aproximados  
Rendimiento aproximado 0,94%  
LT= Limite Térmico  
RE= Mod. Rectificado

El sufijo RE significa con engranajes rectificados.



## TABLA DE POTENCIAS (HP)

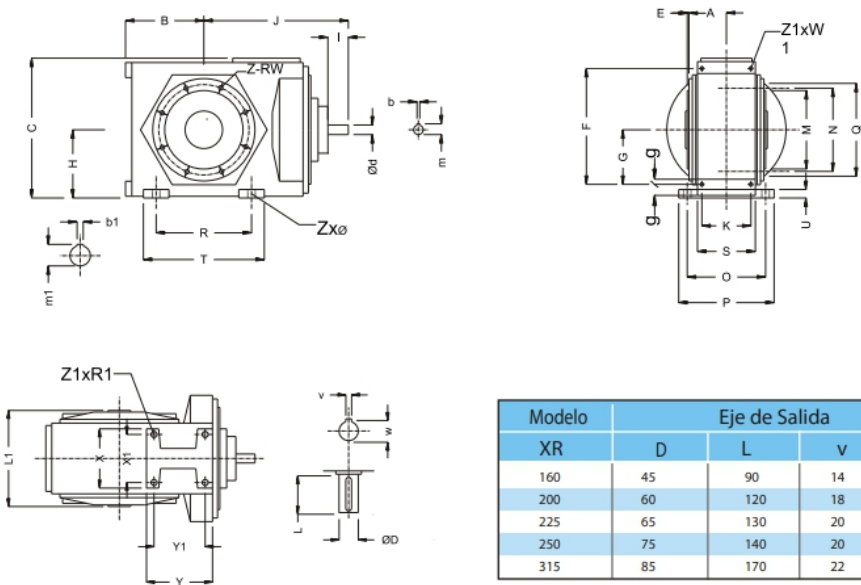
| Relación |          | 1:20  |    | 1:22  |    | 1:25  |    | 1:28  |    | 1:30  |    | 1:35  |    | 1:40  |    | 1:50  |    | 1:60  |    | 1:75  |    | 1:100 |    | 1:125 |    | LT  |
|----------|----------|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-----|
| Mod.     | Ent. RPM | RE HP | S  | RE HP | S  | RE HP | S  | RE HP | S  | RE HP | S  | RE HP | S  | RE HP | S  | RE HP | S  | RE HP | S  | RE HP | S  | RE HP | S  | RE HP | S  | HP  |
| 230      | 1500     | -     | 75 | -     | 68 | -     | 60 | -     | 53 | -     | 50 | 11    | 42 | 10    | 37 | 8     | 30 | 6     | 25 | 5     | 20 | 4     | 15 | 3     | 12 | 34  |
|          | 1500     | -     | 75 | -     | 68 | -     | 60 | -     | 53 | -     | 50 | 21    | 42 | 20    | 37 | 16    | 30 | 14    | 25 | 10    | 20 | 8     | 15 | 6     | 12 |     |
|          | 1000     | -     | 50 | -     | 45 | -     | 40 | -     | 36 | -     | 33 | 16    | 28 | 14    | 25 | 10    | 20 | 9     | 16 | 7     | 13 | 5     | 10 | 4     | 8  | 40  |
|          | 500      | -     | 25 | -     | 23 | -     | 20 | -     | 18 | -     | 16 | 9     | 14 | 8     | 12 | 5     | 10 | 4     | 8  | 3     | 6  | 2,5   | 5  | 2     | 4  |     |
| 320      | 1500     | -     | 75 | -     | 68 | -     | 60 | -     | 53 | -     | 50 | 38    | 42 | 34    | 37 | 30    | 30 | 25    | 25 | 17    | 20 | 11    | 15 | 9     | 12 |     |
|          | 1000     | -     | 50 | -     | 45 | -     | 40 | -     | 36 | -     | 33 | 28    | 28 | 24    | 25 | 21    | 20 | 16    | 16 | 10    | 13 | 8     | 10 | 6     | 8  | 66  |
|          | 500      | -     | 25 | -     | 23 | -     | 20 | -     | 18 | -     | 16 | 14    | 14 | 13    | 12 | 10    | 10 | 8     | 8  | 5     | 6  | 4     | 5  | 3     | 4  |     |
|          | 1500     | 102   | 75 | 93    | 68 | 87    | 60 | 76    | 53 | 65    | 50 | 60    | 42 | 55    | 37 | 43    | 30 | 38    | 25 | 26    | 20 | 19    | 15 | 15    | 12 |     |
| 370      | 1000     | 73    | 50 | 66    | 45 | 62    | 40 | 54    | 36 | 46    | 33 | 44    | 28 | 40    | 25 | 29    | 20 | 24    | 16 | 19    | 13 | 13    | 10 | 10    | 8  | 94  |
|          | 500      | -     | 25 | -     | 23 | -     | 20 | -     | 18 | -     | 16 | 24    | 14 | 20    | 12 | 14    | 10 | 12    | 8  | 9     | 6  | 6     | 5  | 5     | 4  |     |
|          | 1500     | 151   | 75 | 126   | 68 | 114   | 60 | 108   | 53 | 103   | 50 | 96    | 42 | 83    | 37 | 78    | 30 | 59    | 25 | 45    | 20 | 38    | 15 | 28    | 12 |     |
|          | 1000     | 106   | 50 | 90    | 45 | 80    | 40 | 76    | 36 | 72    | 33 | 69    | 28 | 63    | 25 | 49    | 20 | 40    | 16 | 25    | 13 | 21    | 10 | 19    | 8  | 119 |
| 420      | 500      | -     | 25 | -     | 23 | -     | 20 | -     | 18 | -     | 16 | 36    | 14 | 34    | 12 | 26    | 10 | 21    | 8  | 17    | 6  | 13    | 5  | 9     | 4  |     |
|          | 1500     | 195   | 75 | 176   | 68 | 157   | 60 | 142   | 53 | 132   | 50 | 121   | 42 | 111   | 37 | 95    | 30 | 78    | 25 | 64    | 20 | 49    | 15 | 39    | 12 |     |
|          | 1000     | 135   | 50 | 123   | 45 | 107   | 40 | 100   | 36 | 93    | 33 | 88    | 28 | 78    | 25 | 63    | 20 | 53    | 16 | 43    | 13 | 31    | 10 | 25    | 8  | 168 |
|          | 500      | -     | 25 | -     | 23 | -     | 20 | -     | 18 | -     | 16 | 44    | 14 | 40    | 12 | 34    | 10 | 26    | 8  | 21    | 6  | 16    | 5  | 13    | 4  |     |
| 490      | 1500     | 270   | 75 | 240   | 68 | 210   | 60 | 190   | 53 | 173   | 50 | 144   | 42 | 135   | 37 | 121   | 30 | 105   | 25 | 79    | 20 | 58    | 15 | 48    | 12 |     |
|          | 1000     | 193   | 50 | 172   | 45 | 150   | 40 | 126   | 36 | 119   | 33 | 110   | 28 | 106   | 25 | 81    | 20 | 65    | 16 | 51    | 13 | 39    | 10 | 30    | 8  | 194 |
|          | 500      | -     | 25 | -     | 23 | -     | 20 | -     | 18 | -     | 16 | 60    | 14 | 55    | 12 | 41    | 10 | 35    | 8  | 26    | 6  | 20    | 5  | 15    | 4  |     |
|          | 1500     | 364   | 75 | 342   | 68 | 320   | 60 | 283   | 53 | 265   | 50 | 243   | 42 | 225   | 37 | 179   | 30 | 156   | 25 | 123   | 20 | 88    | 15 | 75    | 12 |     |
| 640      | 1000     | 256   | 50 | 240   | 45 | 225   | 40 | 200   | 36 | 186   | 33 | 179   | 28 | 168   | 25 | 123   | 20 | 98    | 16 | 81    | 13 | 59    | 10 | 50    | 8  | 251 |
|          | 500      | -     | 25 | -     | 23 | -     | 20 | -     | 18 | -     | 16 | 101   | 14 | 89    | 12 | 64    | 10 | 54    | 8  | 44    | 6  | 30    | 5  | 25    | 4  |     |
|          | 1500     | 450   | 75 | 440   | 68 | 430   | 60 | 390   | 53 | 360   | 50 | 318   | 42 | 280   | 37 | 239   | 30 | 195   | 25 | 138   | 20 | 121   | 15 | 98    | 12 |     |
|          | 1000     | 314   | 50 | 309   | 45 | 302   | 40 | 279   | 36 | 253   | 33 | 239   | 28 | 210   | 25 | 159   | 20 | 126   | 16 | 106   | 13 | 81    | 10 | 65    | 8  | 335 |
| 720      | 500      | -     | 25 | -     | 23 | -     | 20 | -     | 18 | -     | 16 | 128   | 14 | 115   | 12 | 93    | 10 | 68    | 8  | 55    | 6  | 41    | 5  | 34    | 4  |     |
|          | 1500     | 679   | 75 | 608   | 68 | 560   | 60 | 530   | 53 | 504   | 50 | 450   | 42 | 419   | 37 | 371   | 30 | 280   | 25 | 215   | 20 | 163   | 15 | 126   | 12 |     |
|          | 1000     | 476   | 50 | 428   | 45 | 400   | 40 | 374   | 36 | 360   | 33 | 343   | 28 | 317   | 25 | 260   | 20 | 194   | 16 | 145   | 13 | 113   | 10 | 85    | 8  | 411 |
|          | 500      | -     | 25 | -     | 23 | -     | 20 | -     | 18 | -     | 16 | 200   | 14 | 184   | 12 | 138   | 10 | 101   | 8  | 75    | 6  | 58    | 5  | 44    | 4  |     |
| 810      | 1500     | -     | 75 | -     | 68 | -     | 60 | -     | 53 | -     | 50 | 505   | 42 | 480   | 37 | 452   | 30 | 381   | 25 | 272   | 20 | 210   | 15 | 173   | 12 |     |
|          | 1000     | -     | 50 | -     | 45 | -     | 40 | -     | 36 | -     | 33 | 337   | 28 | 326   | 25 | 320   | 20 | 263   | 16 | 188   | 13 | 145   | 10 | 117   | 8  | 500 |



# ENGRANAJES

## MODELO XR

Reductor compacto versátil de triple tren de engranajes de disposición ortogonal.  
Con eje de salida hueco o macizo.



| Modelo | Eje de Salida |     |    |      |
|--------|---------------|-----|----|------|
| XR     | D             | L   | v  | w    |
| 160    | 45            | 90  | 14 | 48,6 |
| 200    | 60            | 120 | 18 | 64,3 |
| 225    | 65            | 130 | 20 | 69,3 |
| 250    | 75            | 140 | 20 | 79,7 |
| 315    | 85            | 170 | 22 | 90,6 |

| Modelo | Eje de Entrada |     |    |      | Eje Hueco |     |    |       | Anclaje |     |     |     |    |       | Cotas Generales |     |     |     |   |     |
|--------|----------------|-----|----|------|-----------|-----|----|-------|---------|-----|-----|-----|----|-------|-----------------|-----|-----|-----|---|-----|
| XR     | Ø-d            | l   | b  | m    | ØD1       | L1  | b1 | m1    | R       | T   | O   | P   | U  | Z-Ø   | H               | A   | B   | C   | E | J   |
| 160    | 24             | 50  | 8  | 27   | 50        | 260 | 14 | 53,6  | 230     | 280 | 196 | 235 | 20 | 04-17 | 160             | 115 | 185 | 332 | 5 | 405 |
| 200    | 28             | 60  | 8  | 31   | 60        | 300 | 18 | 64,3  | 280     | 355 | 230 | 280 | 25 | 04-22 | 200             | 140 | 230 | 410 | 5 | 462 |
| 225    | 38             | 80  | 10 | 41,4 | 70        | 320 | 20 | 74,7  | 355     | 425 | 240 | 290 | 30 | 04-22 | 225             | 150 | 260 | 480 | 5 | 525 |
| 250    | 42             | 90  | 12 | 45,6 | 80        | 340 | 22 | 85,6  | 420     | 490 | 270 | 320 | 40 | 04-24 | 250             | 160 | 285 | 506 | 5 | 565 |
| 315    | 52             | 110 | 16 | 55,9 | 95        | 430 | 25 | 100,4 | 510     | 590 | 350 | 410 | 45 | 04-26 | 315             | 205 | 365 | 640 | 5 | 658 |

| Cotas Generales |     |     |     |         |        |     |     |     |     |    |        |     |     |     |     |        |     |
|-----------------|-----|-----|-----|---------|--------|-----|-----|-----|-----|----|--------|-----|-----|-----|-----|--------|-----|
| XR              | ØM  | ØN  | ØQ  | alfa    | ZxRW   | F   | G   | K   | S   | g  | Z1xW1  | X   | X1  | Y   | Y1  | Z1xR1  | DM  |
| 160             | 180 | 215 | 250 | 45º     | 4-1/2" | 240 | 130 | 116 | 160 | 25 | 5/8"   | 150 | 120 | 150 | 120 | W 1/2" | 300 |
| 200             | 230 | 265 | 300 | 22º 30' | 8-1/2" | 290 | 160 | 144 | 190 | 30 | 3/4"   | 185 | 150 | 190 | 150 | W 5/8" | 350 |
| 225             | 250 | 300 | 350 | 22º 30' | 8-5/8" | 255 | 190 | 160 | 220 | 30 | 3/4"   | 200 | 160 | 230 | 190 | W 5/8" | 350 |
| 250             | 300 | 350 | 400 | 22º 30' | 8-5/8" | 390 | 210 | 170 | 220 | 35 | 1"     | 220 | 175 | 255 | 205 | W 3/4" | 450 |
| 315             | 350 | 400 | 450 | 22º 30' | 8-5/8" | 515 | 275 | 220 | 310 | 35 | 1 1/4" | 280 | 230 | 320 | 260 | W 3/4" | 550 |

TABLA DE POTENCIAS (HP)

| Relación |          | 1:10  |     | 1:12,5 |     | 1:16  |    | 1:20  |    | 1:25  |    | 1:32  |    | 1:40  |      | 1:50  |    | 1:60  |    | LT | Peso |
|----------|----------|-------|-----|--------|-----|-------|----|-------|----|-------|----|-------|----|-------|------|-------|----|-------|----|----|------|
| Mod.     | Ent. RPM | RE HP | S   | RE HP  | S   | RE HP | S  | RE HP | S  | RE HP | S  | RE HP | S  | RE HP | S    | RE HP | S  | RE HP | S  | HP | HP   |
| XR 160   | 1500     | 18    | 150 | 15     | 120 | 12    | 94 | 10    | 75 | 7     | 60 | 6     | 47 | 5     | 37   | 3     | 30 | 2,5   | 25 | 22 | 160  |
|          | 1000     | 12    | 100 | 10     | 80  | 8     | 62 | 7     | 50 | 5     | 40 | 4     | 31 | 3     | 25   | 2     | 20 | 1,5   | 16 |    |      |
|          | 500      | 6     | 50  | 5      | 40  | 4     | 31 | 3,5   | 25 | 2,5   | 20 | 2     | 16 | 1,5   | 12,5 | 1     | 10 | 0,88  | 8  |    |      |
| XR 200   | 1500     | 35    | 150 | 30     | 120 | 25    | 94 | 20    | 75 | 15    | 60 | 13    | 47 | 10    | 37   | 8     | 30 | 6     | 25 | 42 | 200  |
|          | 1000     | 24    | 100 | 20     | 80  | 17    | 62 | 14    | 50 | 10    | 40 | 9     | 31 | 7     | 25   | 5     | 20 | 4     | 16 |    |      |
|          | 500      | 12    | 50  | 10     | 40  | 9     | 31 | 7     | 25 | 6     | 20 | 5     | 16 | 4     | 12,5 | 3     | 10 | 2     | 8  |    |      |
| XR 225   | 1500     | 50    | 150 | 40     | 120 | 30    | 94 | 25    | 75 | 20    | 60 | 15    | 47 | 13    | 37   | 10    | 30 | 8     | 25 | 52 | 315  |
|          | 1000     | 34    | 100 | 27     | 80  | 20    | 62 | 17    | 50 | 14    | 40 | 10    | 31 | 9     | 25   | 7     | 20 | 5     | 16 |    |      |
|          | 500      | 17    | 50  | 13,5   | 40  | 10    | 31 | 9     | 25 | 7     | 20 | 5     | 16 | 4     | 12,5 | 3     | 10 | 2,5   | 8  |    |      |
| XR 250   | 1500     | 60    | 150 | 50     | 120 | 40    | 94 | 35    | 75 | 30    | 60 | 25    | 47 | 20    | 37   | 15    | 30 | 13    | 25 | 61 | 550  |
|          | 1000     | 40    | 100 | 34     | 80  | 27    | 62 | 24    | 50 | 20    | 40 | 17    | 31 | 14    | 25   | 10    | 20 | 9     | 16 |    |      |
|          | 500      | 20    | 50  | 17     | 40  | 14    | 31 | 12    | 25 | 10    | 20 | 9     | 16 | 7     | 12,5 | 5     | 10 | 4     | 8  |    |      |
| XR 315   | 1500     | 100   | 150 | 85     | 120 | 70    | 94 | 60    | 75 | 50    | 60 | 40    | 47 | 30    | 37   | 25    | 30 | 20    | 25 | 94 | 695  |
|          | 1000     | 70    | 100 | 57     | 80  | 47    | 62 | 40    | 50 | 34    | 40 | 27    | 31 | 20    | 25   | 17    | 20 | 14    | 16 |    |      |
|          | 500      | 35    | 50  | 28     | 40  | 24    | 31 | 20    | 25 | 17    | 20 | 14    | 16 | 10    | 12,5 | 9     | 10 | 7     | 8  |    |      |

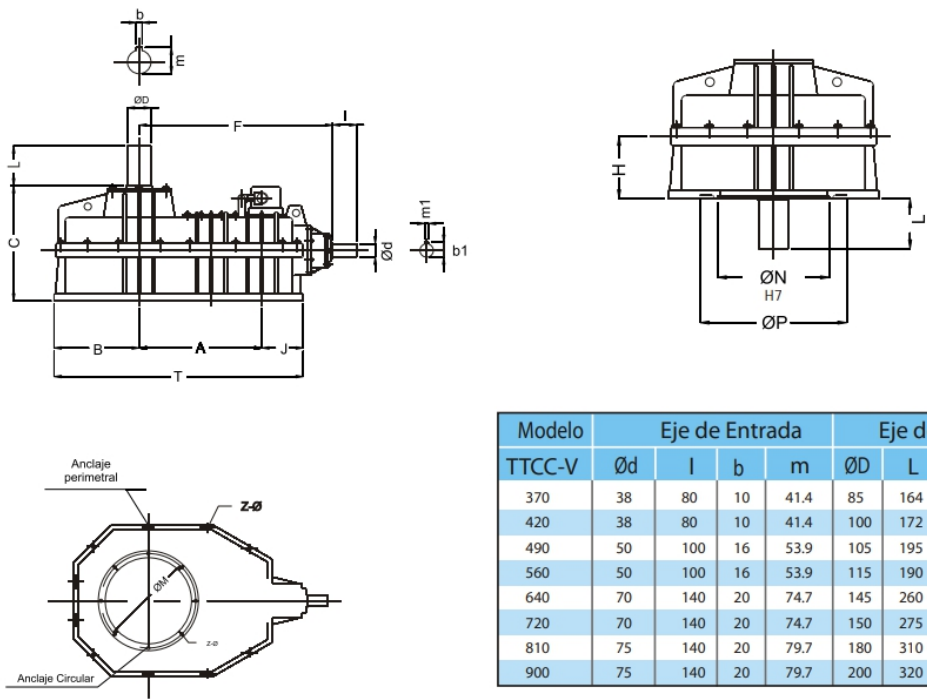


# ENGRANAJES

## MODELO TTCCV

Reductor vertical de triple tren de engranajes  
Cónicos y helicoidales.

Flancos de dientes rectificados. De disposición ortogonal.



| Modelo | Eje de Entrada |     |    |      | Eje de Salida |     |    |       |
|--------|----------------|-----|----|------|---------------|-----|----|-------|
| TTCC-V | Ød             | l   | b  | m    | ØD            | L   | b1 | m1    |
| 370    | 38             | 80  | 10 | 41.4 | 85            | 164 | 22 | 90.6  |
| 420    | 38             | 80  | 10 | 41.4 | 100           | 172 | 28 | 106.2 |
| 490    | 50             | 100 | 16 | 53.9 | 105           | 195 | 28 | 111.2 |
| 560    | 50             | 100 | 16 | 53.9 | 115           | 190 | 32 | 122.1 |
| 640    | 70             | 140 | 20 | 74.7 | 145           | 260 | 36 | 152.9 |
| 720    | 70             | 140 | 20 | 74.7 | 150           | 275 | 40 | 168.7 |
| 810    | 75             | 140 | 20 | 79.7 | 180           | 310 | 45 | 189.9 |
| 900    | 75             | 140 | 20 | 79.7 | 200           | 320 | 45 | 209.9 |

Cabos de eje normalizados (DIN 42572) Ajuste ISA g6

| Modelo | Eje de entrada |     |     |       | Cotas de Anclaje |      |                                             | Cotas Generales |     |     |      |     |     |      |      |
|--------|----------------|-----|-----|-------|------------------|------|---------------------------------------------|-----------------|-----|-----|------|-----|-----|------|------|
| TTCC-V | P              | M   | N   | Z-Ø   | T                | K    | Z-Ø                                         | A               | B   | J   | F    | C   | H   | Kg   | Lts. |
| 370    | 450            | 400 | 350 | 8-M16 | 840              | 520  | Pedir certificación por agujeros de anclaje | 370             | 260 | 210 | 645  | 505 | 200 | 385  | 26   |
| 420    | 450            | 400 | 350 | 8-M16 | 910              | 560  |                                             | 420             | 280 | 210 | 695  | 555 | 220 | 451  | 37   |
| 490    | 500            | 450 | 400 | 8-M20 | 1050             | 670  |                                             | 490             | 335 | 225 | 765  | 605 | 240 | 578  | 54   |
| 560    | 500            | 450 | 400 | 8-M20 | 1150             | 700  |                                             | 560             | 350 | 240 | 835  | 630 | 250 | 748  | 70   |
| 640    | 550            | 500 | 450 | 8-M20 | 1300             | 820  |                                             | 640             | 410 | 250 | 1090 | 650 | 265 | 1010 | 110  |
| 720    | 550            | 500 | 450 | 8-M20 | 1475             | 960  |                                             | 720             | 480 | 275 | 1170 | 690 | 280 | 1490 | 160  |
| 810    | 660            | 600 | 550 | 8-M25 | 1610             | 1040 |                                             | 810             | 520 | 280 | 1200 | 740 | 300 | 1870 | 230  |
| 900    | 660            | 600 | 550 | 8-M25 | 1760             | 1180 |                                             | 900             | 575 | 285 | 1290 | 790 | 350 | 2300 | 310  |

La cantidad de lubricante es indicativa y está referida a la relación mas alta, enotra consultar.

Los pesos son aproximados y sin considerar el lubricante.

Rogamos pedir certificación de las medidas actualizadas de los equipos.

En casos en que la potencia del equipo supere el límite térmico, será necesario el agregado de un intercambiador de calor. Las presentes potencias y relaciones con sus consiguientes rpm de salida, son indicativas y de fabricación STD. Por otras intermedias consultar con nuestro Dpro. Técnico.

Opcionales Eje de salida hueco (Pos. IV) Mando completo compuesto por motor, acoplamiento hidráulico "TURBOMOTOR", acople flexible, reductor, protector y bastidor conjunto.

# ENGRANAJES

Posición de Montaje

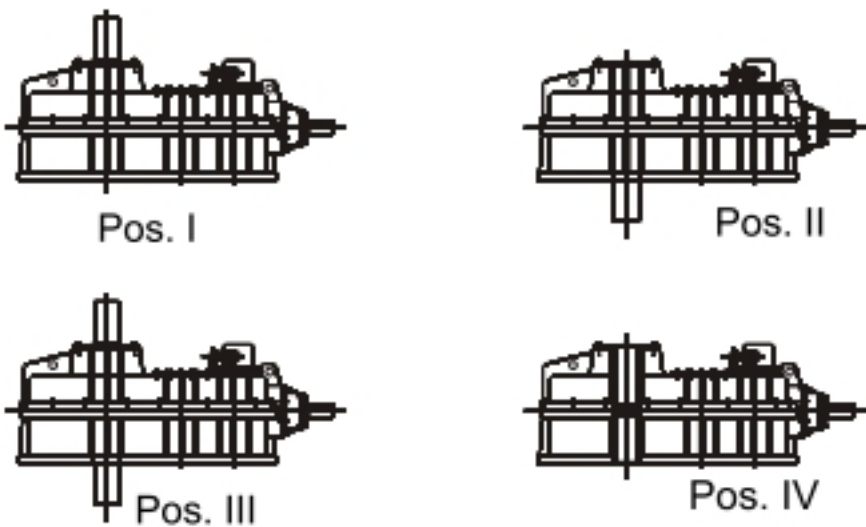


TABLA DE POTENCIAS (HP)

| Relación |          | 1:20  |    | 1:22  |    | 1:25  |    | 1:28  |    | 1:30  |    | 1:35  |    | 1:40  |    | 1:50  |    | 1:60  |    | 1:75  |    | 1:100 |    | 1:125 |    | LT  |
|----------|----------|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-----|
| Mod.     | Ent. RPM | RE HP | S  | RE HP | S  | RE HP | S  | RE HP | S  | RE HP | S  | RE HP | S  | RE HP | S  | RE HP | S  | RE HP | S  | RE HP | S  | RE HP | S  | RE HP | S  | HP  |
| 230      | 1500     | -     | 75 | -     | 68 | -     | 60 | -     | 53 | -     | 50 | 11    | 42 | 10    | 37 | 8     | 30 | 6     | 25 | 5     | 20 | 4     | 15 | 3     | 12 | 34  |
|          | 1500     | -     | 75 | -     | 68 | -     | 60 | -     | 53 | -     | 50 | 21    | 42 | 20    | 37 | 16    | 30 | 14    | 25 | 10    | 20 | 8     | 15 | 6     | 12 | 40  |
| 280      | 1000     | -     | 50 | -     | 45 | -     | 40 | -     | 36 | -     | 33 | 16    | 28 | 14    | 25 | 10    | 20 | 9     | 16 | 7     | 13 | 5     | 10 | 4     | 8  |     |
|          | 500      | -     | 25 | -     | 23 | -     | 20 | -     | 18 | -     | 16 | 9     | 14 | 8     | 12 | 5     | 10 | 4     | 8  | 3     | 6  | 2,5   | 5  | 2     | 4  | 66  |
| 320      | 1500     | -     | 75 | -     | 68 | -     | 60 | -     | 53 | -     | 50 | 38    | 42 | 34    | 37 | 30    | 30 | 25    | 25 | 17    | 20 | 11    | 15 | 9     | 12 |     |
|          | 1000     | -     | 50 | -     | 45 | -     | 40 | -     | 36 | -     | 33 | 28    | 28 | 24    | 25 | 21    | 20 | 16    | 16 | 10    | 13 | 8     | 10 | 6     | 8  | 94  |
| 370      | 500      | -     | 25 | -     | 23 | -     | 20 | -     | 18 | -     | 16 | 14    | 14 | 13    | 12 | 10    | 10 | 8     | 8  | 5     | 6  | 4     | 5  | 3     | 4  |     |
|          | 1500     | 102   | 75 | 93    | 68 | 87    | 60 | 76    | 53 | 65    | 50 | 60    | 42 | 55    | 37 | 43    | 30 | 38    | 25 | 26    | 20 | 19    | 15 | 15    | 12 | 119 |
| 420      | 1000     | 73    | 50 | 66    | 45 | 62    | 40 | 54    | 36 | 46    | 33 | 44    | 28 | 40    | 25 | 29    | 20 | 24    | 16 | 19    | 13 | 13    | 10 | 10    | 8  |     |
|          | 500      | -     | 25 | -     | 23 | -     | 20 | -     | 18 | -     | 16 | 24    | 14 | 20    | 12 | 14    | 10 | 12    | 8  | 9     | 6  | 6     | 5  | 5     | 4  | 168 |
| 490      | 1500     | 151   | 75 | 126   | 68 | 114   | 60 | 108   | 53 | 103   | 50 | 96    | 42 | 83    | 37 | 78    | 30 | 59    | 25 | 45    | 20 | 38    | 15 | 28    | 12 |     |
|          | 1000     | 106   | 50 | 90    | 45 | 80    | 40 | 76    | 36 | 72    | 33 | 69    | 28 | 63    | 25 | 49    | 20 | 40    | 16 | 25    | 13 | 21    | 10 | 19    | 8  | 194 |
| 560      | 500      | -     | 25 | -     | 23 | -     | 20 | -     | 18 | -     | 16 | 36    | 14 | 34    | 12 | 26    | 10 | 21    | 8  | 17    | 6  | 13    | 5  | 9     | 4  |     |
|          | 1500     | 195   | 75 | 176   | 68 | 157   | 60 | 142   | 53 | 132   | 50 | 121   | 42 | 111   | 37 | 95    | 30 | 78    | 25 | 64    | 20 | 49    | 15 | 39    | 12 | 251 |
| 640      | 1000     | 135   | 50 | 123   | 45 | 107   | 40 | 100   | 36 | 93    | 33 | 88    | 28 | 78    | 25 | 63    | 20 | 53    | 16 | 43    | 13 | 31    | 10 | 25    | 8  |     |
|          | 500      | -     | 25 | -     | 23 | -     | 20 | -     | 18 | -     | 16 | 44    | 14 | 40    | 12 | 34    | 10 | 26    | 8  | 21    | 6  | 16    | 5  | 13    | 4  | 335 |
| 720      | 1500     | 270   | 75 | 240   | 68 | 210   | 60 | 190   | 53 | 173   | 50 | 144   | 42 | 135   | 37 | 121   | 30 | 105   | 25 | 79    | 20 | 58    | 15 | 48    | 12 |     |
|          | 1000     | 193   | 50 | 172   | 45 | 150   | 40 | 126   | 36 | 119   | 33 | 110   | 28 | 106   | 25 | 81    | 20 | 65    | 16 | 51    | 13 | 39    | 10 | 30    | 8  | 411 |
| 810      | 500      | -     | 25 | -     | 23 | -     | 20 | -     | 18 | -     | 16 | 60    | 14 | 55    | 12 | 41    | 10 | 35    | 8  | 26    | 6  | 20    | 5  | 15    | 4  |     |
|          | 1500     | 364   | 75 | 342   | 68 | 320   | 60 | 283   | 53 | 265   | 50 | 243   | 42 | 225   | 37 | 179   | 30 | 156   | 25 | 123   | 20 | 88    | 15 | 75    | 12 | 500 |
| 900      | 1000     | 256   | 50 | 240   | 45 | 225   | 40 | 200   | 36 | 186   | 33 | 179   | 28 | 168   | 25 | 123   | 20 | 98    | 16 | 81    | 13 | 59    | 10 | 50    | 8  |     |
|          | 500      | -     | 25 | -     | 23 | -     | 20 | -     | 18 | -     | 16 | 101   | 14 | 89    | 12 | 64    | 10 | 54    | 8  | 44    | 6  | 30    | 5  | 25    | 4  | 335 |
| 810      | 1500     | 450   | 75 | 440   | 68 | 430   | 60 | 390   | 53 | 360   | 50 | 318   | 42 | 280   | 37 | 239   | 30 | 195   | 25 | 138   | 20 | 121   | 15 | 98    | 12 |     |
|          | 1000     | 314   | 50 | 309   | 45 | 302   | 40 | 279   | 36 | 253   | 33 | 239   | 28 | 210   | 25 | 159   | 20 | 126   | 16 | 106   | 13 | 81    | 10 | 65    | 8  | 411 |
| 900      | 500      | -     | 25 | -     | 23 | -     | 20 | -     | 18 | -     | 16 | 128   | 14 | 115   | 12 | 93    | 10 | 68    | 8  | 55    | 6  | 41    | 5  | 34    | 4  |     |
|          | 1500     | 679   | 75 | 608   | 68 | 560   | 60 | 530   | 53 | 504   | 50 | 450   | 42 | 419   | 37 | 371   | 30 | 280   | 25 | 215   | 20 | 163   | 15 | 126   | 12 | 500 |
|          | 1000     | 476   | 50 | 428   | 45 | 400   | 40 | 374   | 36 | 360   | 33 | 343   | 28 | 317   | 25 | 260   | 20 | 194   | 16 | 145   | 13 | 113   | 10 | 85    | 8  |     |
|          | 500      | -     | 25 | -     | 23 | -     | 20 | -     | 18 | -     | 16 | 200   | 14 | 184   | 12 | 138   | 10 | 101   | 8  | 75    | 6  | 58    | 5  | 44    | 4  | 500 |
|          | 1500     | -     | 75 | -     | 68 | -     | 60 | -     | 53 | -     | 50 | 505   | 42 | 480   | 37 | 452   | 30 | 381   | 25 | 272   | 20 | 210   | 15 | 173   | 12 |     |
|          | 1000     | -     | 50 | -     | 45 | -     | 40 | -     | 36 | -     | 33 | 337   | 28 | 326   | 25 | 320   | 20 | 263   | 16 | 188   | 13 | 145   | 10 | 117   | 8  |     |