

# ÍNDICE DE PRODUCTOS

## PRODUCTS INDEX

| RUEDAS LIBRES<br>FREE WHEELS                                                       | CARACTERÍSTICAS<br>FEATURES                                                                                                                                                             | SUBTIPOS<br>SUBTYPES | CARACTERÍSTICAS SUBTIPOS<br>SUBTYPES FEATURES                                                              |  |
|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|------------------------------------------------------------------------------------------------------------|--|
|    | <b>HF</b><br>Ruedas libres con jaula<br><i>Drawn cup roller clutches</i>                                                                                                                | -                    | con resortes de acero / with steel springs                                                                 |  |
|                                                                                    |                                                                                                                                                                                         | .. KF                | con resortes de plástico / with plastic springs                                                            |  |
|                                                                                    |                                                                                                                                                                                         | .. R                 | con resortes de acero y moleteado en aro exterior<br><i>with steel springs and knurled outer ring</i>      |  |
|                                                                                    |                                                                                                                                                                                         | .. KFR               | con resortes de plástico y moleteado en aro exterior<br><i>with plastic springs and knurled outer ring</i> |  |
|    | <b>HFL</b><br>Ruedas libres de jaula<br><i>Drawn cup roller clutches</i>                                                                                                                | -                    | con resortes de acero / with steel springs                                                                 |  |
|                                                                                    |                                                                                                                                                                                         | .. KF                | con resortes de plástico / with plastic springs                                                            |  |
|                                                                                    |                                                                                                                                                                                         | .. R                 | con resortes de acero y moleteado en aro exterior<br><i>with steel springs and knurled outer ring</i>      |  |
|                                                                                    |                                                                                                                                                                                         | .. KFR               | con resortes de plástico y moleteado en aro exterior<br><i>with plastic springs and knurled outer ring</i> |  |
|   | <b>DC</b><br>Ruedas libres de levas<br><i>Sprag type free wheels</i>                                                                                                                    | -                    | -                                                                                                          |  |
|    | <b>KI</b><br>Ruedas libres de rodillos de poliamida<br><i>Roller type free wheels in polyamide</i>                                                                                      | -                    | -                                                                                                          |  |
|   | <b>KK</b><br>Ruedas libres de rodillos sin ranura<br><i>Roller type free wheels without keyway</i>                                                                                      | -                    | no blindado / without shields                                                                              |  |
|                                                                                    |                                                                                                                                                                                         | 2RS                  | blindado / shielded                                                                                        |  |
|  | <b>KK (P)</b><br>Ruedas libres de rodillos con ranura<br><i>Roller type free wheels with keyway</i>                                                                                     | ..P                  | ranura en aro interior - keyway on inner ring                                                              |  |
|                                                                                    |                                                                                                                                                                                         | ..PP                 | ranura en aro interior/ y exterior<br><i>keyway on outer and inner ring</i>                                |  |
|                                                                                    |                                                                                                                                                                                         | ..P-2RS              | ranura en aro interior con blindaje<br><i>keyway on inner ring, shielded</i>                               |  |
|  | <b>NSS (AS)</b><br>Ruedas libres de rodillos con ranura interior<br><i>Roller type free wheel with inner keyway</i>                                                                     | -                    | -                                                                                                          |  |
|  | <b>NFS (ASNU)</b><br>Ruedas libres de rodillos con ranuras<br><i>Roller type free wheel with keyways</i>                                                                                | -                    | -                                                                                                          |  |
|  | <b>AE</b><br>Ruedas libres de rodillos con ranuras<br><i>Roller type free wheel with keyways</i>                                                                                        | -                    | -                                                                                                          |  |
|  | <b>AA</b><br>Ruedas libres de rodillos con ranura y orificios de fijación<br><i>Roller type free wheel with keyway and fixing holes</i>                                                 | -                    | -                                                                                                          |  |
|  | <b>NF</b><br>Ruedas libres de rodillos con ranuras<br><i>Roller type free wheel with keyways</i>                                                                                        | -                    | -                                                                                                          |  |
|  | <b>NFR</b><br>Ruedas libres de rodillos con ranuras<br><i>Roller type free wheel with keyways</i>                                                                                       | -                    | -                                                                                                          |  |
|  | <b>RSBW</b><br>Ruedas libres de excéntricas para montaje exterior con ranura interior, estanca<br><i>Sprag type free wheel with inner keyway for external mounting, self-contained</i>  | -                    | -                                                                                                          |  |
|  | <b>AV</b><br>Ruedas libres de rodillos para montaje exterior con ranura interior, estanca<br><i>Roller type free wheel with inner keyway for external mounting, self-contained</i>      | -                    | -                                                                                                          |  |
|  | <b>GFR (N)</b><br>Ruedas libres de rodillos para montaje exterior con ranura interior, estanca<br><i>Roller type free wheel with inner keyway for external mounting, self-contained</i> | GFR..                | sin ranura exterior / without outer keyway                                                                 |  |
|                                                                                    |                                                                                                                                                                                         | GFRN..               | con ranura exterior / with outer keyway                                                                    |  |
|  | <b>GFR F1 F2 F7<br/>GFRN F5 F6</b><br>Ruedas libres de rodillos con ranura interior y orificios de fijación<br><i>Roller type free wheel with inner keyway and fixing holes</i>         | GFR F1F2             | GFR con bridas tipo 1 y 2 / GFR with flange type 1 and 2                                                   |  |
|                                                                                    |                                                                                                                                                                                         | GFR F2F7             | GFR con bridas tipo 2 y 7 / GFR with flange type 2 and 7                                                   |  |
|                                                                                    |                                                                                                                                                                                         | GFR F5F6             | GFR con bridas tipo 5 y 6 / GFR with flange type 5 and 6                                                   |  |
|  | <b>GFR<br/>F2 F3 F4</b><br>Ruedas libres de rodillos para montaje exterior con ranura interior<br><i>Roller type free wheel for external mounting, with inner keyway</i>                | GFR F2F3             | GFR con bridas tipo 2 y 3 / GFR with flange type 2 and 3                                                   |  |
|                                                                                    |                                                                                                                                                                                         | GFR F3F4             | GFR con bridas tipo 3 y 4 / GFR with flange type 3 and 4                                                   |  |

# TABLA DE INTERCAMBIABILIDAD

## INTERCHANGEABILITY TABLE

| Ruedas libres<br>- Free Wheels                                                                   | Equivalente a... - Equivalent to... |               |              |                 |     |
|--------------------------------------------------------------------------------------------------|-------------------------------------|---------------|--------------|-----------------|-----|
|                                                                                                  | RINGSPANN                           | CTS           | STIEBER      | GERIT           | INA |
| <b>NBS</b>                                                                                       |                                     |               |              |                 |     |
| HF              | -                                   | -             | -            | W, H            | HF  |
| HFL             | -                                   | -             | -            | WL, HL          | HFL |
| DC              | SF/BWX                              | -             | DC           | -               | -   |
| KI              | -                                   | -             | KI           | -               | -   |
| KK              | ZZ                                  | UK            | CSK          | CSK             | -   |
| NSS (AS)       | FCN/FCN...R                         | US            | AS (NSS)     | AS              | -   |
| NFS (ASNU)    | FSN/FSN...R                         | USNU          | ASNU (NFS)   | ASNU            | -   |
| AE            | -                                   | -             | -            | -               | -   |
| AA            | -                                   | -             | AA           | -               | -   |
| NF            | FN...R                              | UF            | NF           | -               | -   |
| NFR           | FNR...R                             | GF            | NFR          | ANG - ANR       | -   |
| RSBW/AV       | FA                                  | GV            | RSBW/AV      | AV              | -   |
| GFR (N)       | FGR (P)                             | GL            | GFR (N)      | AL (P)          | -   |
| GFR F1 F2 F7  | FGR A1 A2 A7                        | GL F2 D2 (D3) | GFR F1 F2 F7 | AL /ALM F2 D2/3 | -   |
| GFRN F5 F6    | FGRN A5 A6                          | GLP F7 D7     | GFRN F5 F6   | ALP/ALMP F7 D7  | -   |
| GFR F2 F3 F4  | FGR A2 A3 A4                        | GL F5 D2 (D3) | GFR F2 F3 F4 | AL /ALM F5 D2/3 | -   |

HF

- con resortes de acero / with steel springs

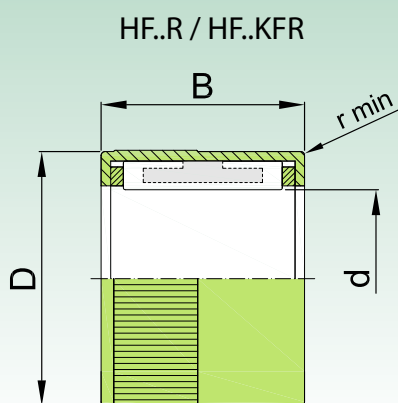
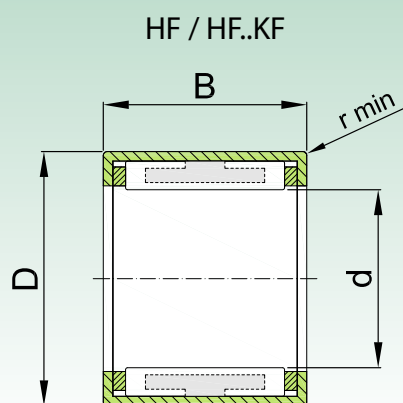
.. KF con resortes de plástico / with plastic springs

.. R con resortes de acero y moleteado en aro exterior / with steel springs and knurled outer ring

.. KFR con resortes de plástico y moleteado en aro exterior / with plastic springs and knurled outer ring

## Ruedas libres con jaula

## Drawn cup roller clutches



| Diámetro eje<br>Shaft diameter | Acabado aro exterior<br>Outer ring finishing | Designación<br>Designation       |                                       | Dimensiones<br>Dimensions |           |                     |               | Torque máximo transmisible<br>Maximum transmittable torque | Velocidad de rotación límite<br>Maximum rotating speed (1) |                                     | Rodamientos de rodillos aplicable para soporte radial<br>Suitable drawn cup needle roller bearings for radial bearing arrangement | Peso<br>Weight |
|--------------------------------|----------------------------------------------|----------------------------------|---------------------------------------|---------------------------|-----------|---------------------|---------------|------------------------------------------------------------|------------------------------------------------------------|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|----------------|
|                                |                                              | Resorte de acero<br>Steel spring | Resorte de plástico<br>Plastic spring | d<br>[mm]                 | D<br>[mm] | B (0 / 0,3)<br>[mm] | r min<br>[mm] |                                                            | Eje<br>Shaft<br>[RPM]                                      | Aro exterior<br>Outer ring<br>[RPM] |                                                                                                                                   |                |
| 3                              | normal/normal                                | -                                | HF0306KF                              | 3                         | 6,5       | 6                   | 0,3           | 0,18                                                       | 45000                                                      | 28000                               | HK0306TN                                                                                                                          | 1              |
|                                | moleteado/knurled                            | -                                | HF0306KFR                             | 3                         | 6,5       | 6                   | 0,3           | 0,06                                                       | 45000                                                      | 28000                               | HK0306TN                                                                                                                          | 1              |
| 4                              | normal/normal                                | -                                | HF0406KF                              | 4                         | 8         | 6                   | 0,3           | 0,34                                                       | 34000                                                      | 14000                               | HK0408TN                                                                                                                          | 1              |
|                                | moleteado/knurled                            | -                                | HF0406KFR                             | 4                         | 8         | 6                   | 0,3           | 0,1                                                        | 34000                                                      | 14000                               | HK0408TN                                                                                                                          | 1              |
| 6                              | normal/normal                                | HF0612                           | HF0612KF                              | 6                         | 10        | 12                  | 0,3           | 1,76                                                       | 23000                                                      | 13000                               | HK0608                                                                                                                            | 3              |
|                                | moleteado/knurled                            | HF0612R                          | HF0612KFR                             | 6                         | 10        | 12                  | 0,3           | 0,5                                                        | 23000                                                      | 13000                               | HK0608                                                                                                                            | 3              |
| 8                              | normal/normal                                | HF0812                           | HF0812KF                              | 8                         | 12        | 12                  | 0,3           | 3,15                                                       | 17000                                                      | 12000                               | HK0808                                                                                                                            | 3,5            |
|                                | moleteado/knurled                            | HF0812R                          | HF0812KFR                             | 8                         | 12        | 12                  | 0,3           | 1                                                          | 17000                                                      | 12000                               | HK0808                                                                                                                            | 3,5            |
| 10                             | normal/normal                                | HF1012                           | HF1012KF                              | 10                        | 14        | 12                  | 0,3           | 5,3                                                        | 14000                                                      | 11000                               | HK1010                                                                                                                            | 4              |
|                                | moleteado/knurled                            | HF1012R                          | HF1012KFR                             | 10                        | 14        | 12                  | 0,3           | 1,5                                                        | 14000                                                      | 11000                               | HK1010                                                                                                                            | 4              |
| 12                             | normal/normal                                | HF1216                           | -                                     | 12                        | 18        | 16                  | 0,3           | 12,2                                                       | 11000                                                      | 8000                                | HK1212                                                                                                                            | 11             |
| 14                             | normal/normal                                | HF1416                           | -                                     | 14                        | 20        | 16                  | 0,3           | 17,3                                                       | 9500                                                       | 8000                                | HK1412                                                                                                                            | 13             |
| 16                             | normal/normal                                | HF1616                           | -                                     | 16                        | 22        | 16                  | 0,3           | 20,5                                                       | 8500                                                       | 7500                                | HK1612                                                                                                                            | 14             |
| 18                             | normal/normal                                | HF1816                           | -                                     | 18                        | 24        | 16                  | 0,3           | 24,1                                                       | 7500                                                       | 7500                                | HK1812                                                                                                                            | 16             |
| 20                             | normal/normal                                | HF2016                           | -                                     | 20                        | 26        | 16                  | 0,3           | 28,5                                                       | 7000                                                       | 6500                                | HK2010                                                                                                                            | 17             |
| 25                             | normal/normal                                | HF2520                           | -                                     | 25                        | 32        | 20                  | 0,3           | 66                                                         | 5500                                                       | 5500                                | HK2512                                                                                                                            | 30             |
| 30                             | normal/normal                                | HF3020                           | -                                     | 30                        | 37        | 20                  | 0,3           | 90                                                         | 4500                                                       | 4500                                | HK3012                                                                                                                            | 36             |
| 35                             | normal/normal                                | HF3520                           | -                                     | 35                        | 42        | 20                  | 0,3           | 121                                                        | 3900                                                       | 3900                                | HK3512                                                                                                                            | 40             |

## Notas / Notes

1) Válidos con lubricación con grasa y aceite  
Valid for oil and grease lubrication

| Tolerancias para montaje a presión / Pressfit coupling tolerances |                                |                                         |                                 |                     |                                   |
|-------------------------------------------------------------------|--------------------------------|-----------------------------------------|---------------------------------|---------------------|-----------------------------------|
| Serie<br>Series                                                   | Diámetro eje<br>Shaft diameter | Tolerancia orificio / Housing tolerance |                                 |                     | Tolerancia eje<br>Shaft tolerance |
|                                                                   |                                | Acero<br>Steel                          | Aleación liviana<br>Light Alloy | Plástico<br>Plastic |                                   |
| HF / HFL                                                          | todos / all sizes              | N6 ( N7)                                | R6 ( R7)                        | -                   | h5 (h6)                           |
| HF..KF<br>HFL..KF                                                 | 3-4mm                          | N6 ( N7)                                | R6 ( R7)                        | -                   | h5 (h6)                           |
|                                                                   | >= 6mm                         | N7                                      | R7                              | -                   | h8                                |
| HF..R / HFL..R                                                    | todos / all sizes              | -                                       | -                               | D-0,05              | h5 (h6)                           |
| HF..KFR<br>HFL..KFR                                               | 3-4mm                          | -                                       | -                               | D-0,05              | h5 (h6)                           |
|                                                                   | >= 6mm                         | -                                       | -                               | D-0,05              | h8                                |

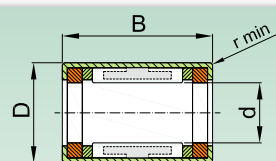
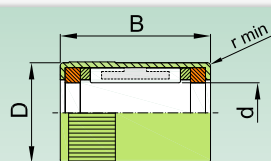
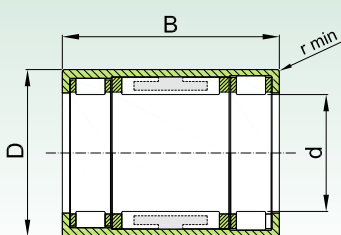
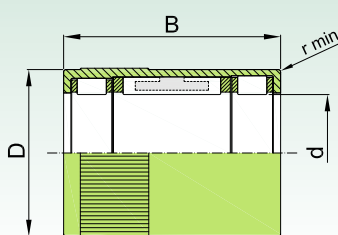
**HFL**

- con resortes de acero / with steel springs

.. KF con resortes de plástico / with plastic springs

.. R con resortes de acero y moleteado en aro exterior / with steel springs and knurled outer ring

.. KFR con resortes de plástico y moleteado en aro exterior / with plastic springs and knurled outer ring

**Ruedas libres con jaula***Drawn cup roller clutches***HFL / HFL..KF (3-6)****HFL..R / HFL..KFR (3-6)****HFL / HFL..KF (8-35)****HFL..R / HFL..KFR (8-35)****Soporte con rodamientos deslizantes / Plain bearing support**

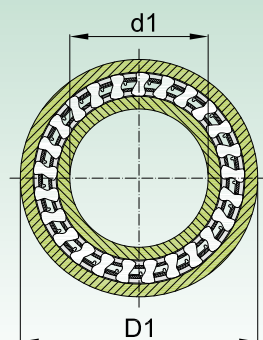
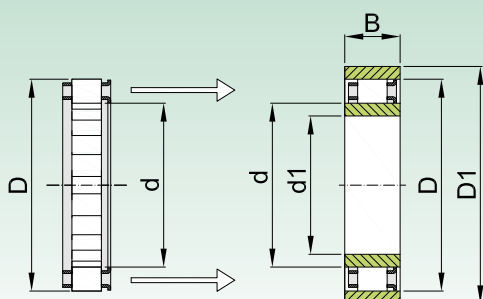
| Diámetro eje<br>Shaft diameter | Acabado aro exterior<br>Outer ring finishing | Designación<br>Designation       |                                       | Dimensiones<br>Dimensions |     |           |       | Torque máximo transmisible<br>Maximum transmittable torque | Velocidad de rotación límite<br>Maximum rotating speed (1) |                            | Carga radial admitida<br>Maximum radial load | Fr*n max (2) | Peso<br>Weight |
|--------------------------------|----------------------------------------------|----------------------------------|---------------------------------------|---------------------------|-----|-----------|-------|------------------------------------------------------------|------------------------------------------------------------|----------------------------|----------------------------------------------|--------------|----------------|
|                                |                                              | Resorte de acero<br>Steel spring | Resorte de plástico<br>Plastic spring | d                         | D   | B (0/0,3) | r min | C op                                                       | Eje Shaft                                                  | Aro exterior<br>Outer ring |                                              |              |                |
|                                |                                              |                                  |                                       |                           |     |           |       |                                                            |                                                            |                            |                                              |              |                |
|                                |                                              |                                  |                                       |                           |     |           |       |                                                            |                                                            |                            |                                              |              |                |
| [mm]                           |                                              |                                  |                                       |                           |     | [Nm]      | [RPM] | [RPM]                                                      | [N]                                                        | [N/min]                    | [g]                                          |              |                |
| 3                              | normal/normal                                | -                                | HFL0308KF                             | 3                         | 6,5 | 8         | 0,3   | 0,18                                                       | 45000                                                      | 28000                      | 60                                           | 16000        | 1,4            |
|                                | moleteado/knurled                            | -                                | HFL0308KFR                            | 3                         | 6,5 | 8         | 0,3   | 0,06                                                       | 45000                                                      | 28000                      | 60                                           | 16000        | 1,4            |
| 4                              | normal/normal                                | -                                | HFL0408KF                             | 4                         | 8   | 8         | 0,3   | 0,34                                                       | 34000                                                      | 14000                      | 80                                           | 16000        | 1,6            |
|                                | moleteado/knurled                            | -                                | HFL0408KFR                            | 4                         | 8   | 8         | 0,3   | 0,1                                                        | 34000                                                      | 14000                      | 80                                           | 16000        | 1,6            |
| 6                              | normal/normal                                | HFL0615                          | HFL0615KF                             | 6                         | 10  | 15        | 0,3   | 1,76                                                       | 23000                                                      | 13000                      | 110                                          | 18000        | 4              |
|                                | moleteado/knurled                            | HFL0615R                         | HFL0615KFR                            | 6                         | 10  | 15        | 0,3   | 0,5                                                        | 23000                                                      | 13000                      | 110                                          | 18000        | 4              |

**Soporte con rodamientos rodantes / Rolling bearing support**

| Diámetro eje<br>Shaft diameter | Acabado aro exterior<br>Outer ring finishing | Designación<br>Designation |            | Dimensiones<br>Dimensions |    |      |       | Torque máximo transmisible<br>Maximum transmittable torque | Velocidad de rotación límite<br>Maximum rotating speed (1) |                                       | Coeficiente de carga radial rodamiento<br>Bearing loads radial rating |       | Carga radial al límite de fatiga<br>Fatigue limit load, radial | Peso<br>Weight |           |
|--------------------------------|----------------------------------------------|----------------------------|------------|---------------------------|----|------|-------|------------------------------------------------------------|------------------------------------------------------------|---------------------------------------|-----------------------------------------------------------------------|-------|----------------------------------------------------------------|----------------|-----------|
|                                |                                              |                            |            |                           |    |      |       |                                                            | Resorte de acero<br>Steel spring                           | Resorte de plástico<br>Plastic spring | d                                                                     | D     |                                                                |                | B (0/0,3) |
|                                |                                              | [mm]                       |            |                           |    | [Nm] | [RPM] | [RPM]                                                      |                                                            |                                       | [N]                                                                   | [N]   | [N]                                                            |                | [g]       |
|                                |                                              |                            |            |                           |    |      |       |                                                            |                                                            |                                       |                                                                       |       |                                                                |                |           |
| 8                              | normal/normal                                | HFL0822                    | HFL0822KF  | 8                         | 12 | 22   | 0,3   | 3,15                                                       | 17000                                                      | 12000                                 | 3650                                                                  | 3950  | 550                                                            | 7              |           |
|                                | moleteado/knurled                            | HFL0822R                   | HFL0822KFR | 8                         | 12 | 22   | 0,3   | 1                                                          | 17000                                                      | 12000                                 | 3650                                                                  | 3950  | 550                                                            | 7              |           |
| 10                             | normal/normal                                | HFL1022                    | HFL1022KF  | 10                        | 14 | 22   | 0,3   | 5,3                                                        | 14000                                                      | 11000                                 | 3950                                                                  | 4500  | 630                                                            | 8              |           |
|                                | moleteado/knurled                            | HFL1022R                   | HFL1022KFR | 10                        | 14 | 22   | 0,3   | 1,5                                                        | 14000                                                      | 11000                                 | 3950                                                                  | 4500  | 630                                                            | 8              |           |
| 12                             | normal/normal                                | HFL1226                    | -          | 12                        | 18 | 26   | 0,3   | 12,2                                                       | 11000                                                      | 8000                                  | 6300                                                                  | 6700  | 920                                                            | 18             |           |
| 14                             | normal/normal                                | HFL1426                    | -          | 14                        | 20 | 26   | 0,3   | 17,3                                                       | 9500                                                       | 8000                                  | 6800                                                                  | 7800  | 1080                                                           | 20             |           |
| 16                             | normal/normal                                | HFL1626                    | -          | 16                        | 22 | 26   | 0,3   | 20,5                                                       | 8500                                                       | 7500                                  | 7400                                                                  | 9000  | 1250                                                           | 22             |           |
| 18                             | normal/normal                                | HFL1826                    | -          | 18                        | 24 | 26   | 0,3   | 24,1                                                       | 7500                                                       | 7500                                  | 8000                                                                  | 10200 | 1420                                                           | 25             |           |
| 20                             | normal/normal                                | HFL2026                    | -          | 20                        | 26 | 26   | 0,3   | 28,5                                                       | 7000                                                       | 6500                                  | 8500                                                                  | 11400 | 1590                                                           | 27             |           |
| 25                             | normal/normal                                | HFL2530                    | -          | 25                        | 32 | 30   | 0,3   | 66                                                         | 5500                                                       | 5500                                  | 10600                                                                 | 14000 | 1900                                                           | 44             |           |
| 30                             | normal/normal                                | HFL3030                    | -          | 30                        | 37 | 30   | 0,3   | 90                                                         | 4500                                                       | 4500                                  | 11600                                                                 | 16900 | 2290                                                           | 51             |           |
| 35                             | normal/normal                                | HFL3530                    | -          | 35                        | 42 | 30   | 0,3   | 121                                                        | 3900                                                       | 3900                                  | 12200                                                                 | 18800 | 2550                                                           | 58             |           |

## Ruedas libres de levas

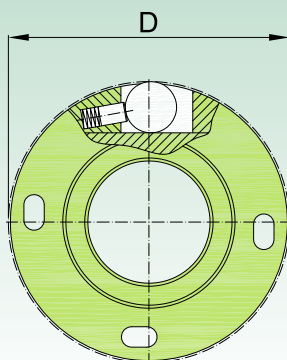
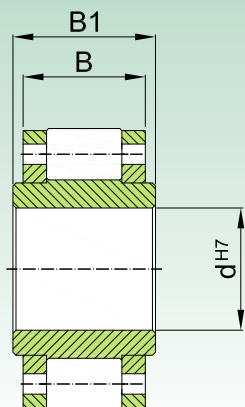
### Sprag free wheels



| Designación<br>Designation | Dimensiones<br>Dimensions |              |                             |      | Dimensiones alojamiento<br>Housing dimensions |        | Par máximo de funcionamiento<br>Maximum operating torque | Velocidad límite del camino de rodadura<br>Overrunning speeds of race |                   | Numero de enganches<br>Number of dips | Numero de levas<br>Number of sprags | Peso<br>Weight |
|----------------------------|---------------------------|--------------|-----------------------------|------|-----------------------------------------------|--------|----------------------------------------------------------|-----------------------------------------------------------------------|-------------------|---------------------------------------|-------------------------------------|----------------|
|                            | d<br>+ 0,008/- 0,005      | D<br>± 0,013 | Espesor leva<br>Sprag width | B    | D1 max                                        | d1 min | C op (1)                                                 | Interior<br>Inner                                                     | Exterior<br>Outer |                                       |                                     |                |
|                            | [mm]                      | [mm]         | [mm]                        | [mm] | [mm]                                          | [mm]   | [Nm]                                                     | [RPM]                                                                 | [RPM]             |                                       |                                     | [kg]           |
| DC2222G-N                  | 22,225                    | 38,885       | 8,33 ±0,1                   | 10,0 | 50                                            | 15     | 63                                                       | 8600                                                                  | 4300              | –                                     | 12                                  | 0,030          |
| DC2776-N                   | 27,762                    | 44,422       | 8,33 ±0,1                   | 13,5 | 58                                            | 18     | 119                                                      | 6900                                                                  | 3400              | –                                     | 14                                  | 0,055          |
| DC3034-N                   | 30,340                    | 47,000       | 8,33 ±0,1                   | 13,5 | 62                                            | 20     | 124                                                      | 6300                                                                  | 3100              | –                                     | 14                                  | 0,060          |
| DC3175(3C)-N               | 31,750                    | 48,410       | 8,33 ±0,1                   | 13,5 | 63                                            | 21     | 159                                                      | 6000                                                                  | 3000              | 3                                     | 16                                  | 0,060          |
| DC3809A-N                  | 38,092                    | 54,752       | 8,33 ±0,1                   | 16,0 | 71                                            | 25     | 275                                                      | 5000                                                                  | 2500              | –                                     | 18                                  | 0,085          |
| DC4127(3C)-N               | 41,275                    | 57,935       | 8,33 ±0,1                   | 13,5 | 75                                            | 27     | 224                                                      | 4600                                                                  | 2300              | 3                                     | 18                                  | 0,090          |
| DC4445A-N                  | 44,450                    | 61,110       | 8,33 ±0,1                   | 16,0 | 79                                            | 29     | 363                                                      | 4300                                                                  | 2100              | –                                     | 20                                  | 0,095          |
| DC4972(4C)-N               | 49,721                    | 66,381       | 8,33 ±0,1                   | 13,5 | 86                                            | 33     | 306                                                      | 3800                                                                  | 1900              | 4                                     | 22                                  | 0,100          |
| DC5476A-N                  | 54,765                    | 71,425       | 8,33 ±0,1                   | 16,0 | 92                                            | 36     | 525                                                      | 3500                                                                  | 1700              | –                                     | 24                                  | 0,110          |
| DC5476A(4C)-N              | 54,765                    | 71,425       | 8,33 ±0,1                   | 16,0 | 92                                            | 36     | 525                                                      | 3500                                                                  | 1700              | 4                                     | 24                                  | 0,130          |
| DC5476B(4C)-N              | 54,765                    | 71,425       | 8,33 ±0,1                   | 21,0 | 92                                            | 36     | 769                                                      | 3500                                                                  | 1700              | 4                                     | 24                                  | 0,180          |
| DC5476C(4C)-N              | 54,765                    | 71,425       | 8,33 ±0,1                   | 25,4 | 92                                            | 36     | 990                                                      | 3500                                                                  | 1700              | 4                                     | 24                                  | 0,200          |
| DC5776A-N                  | 57,760                    | 74,420       | 8,33 ±0,1                   | 16,0 | 98                                            | 38     | 604                                                      | 3300                                                                  | 1600              | –                                     | 26                                  | 0,110          |
| DC6334B-N                  | 63,340                    | 80,000       | 8,33 ±0,1                   | 21,0 | 104                                           | 42     | 806                                                      | 3000                                                                  | 1500              | –                                     | 26                                  | 0,175          |
| DC7221(5C)-N               | 72,217                    | 88,877       | 8,33 ±0,1                   | 13,5 | 115                                           | 48     | 675                                                      | 2600                                                                  | 1300              | 5                                     | 30                                  | 0,140          |
| DC7221B-N                  | 72,217                    | 88,877       | 8,33 ±0,1                   | 21,0 | 115                                           | 48     | 1279                                                     | 2600                                                                  | 1300              | –                                     | 30                                  | 0,185          |
| DC7221B(5C)-N              | 72,217                    | 88,877       | 8,33 ±0,1                   | 21,0 | 115                                           | 48     | 1279                                                     | 2600                                                                  | 1300              | 5                                     | 30                                  | 0,210          |
| DC7969C(5C)-N              | 79,698                    | 96,358       | 8,33 ±0,1                   | 25,4 | 124                                           | 53     | 2038                                                     | 2400                                                                  | 1200              | 5                                     | 34                                  | 0,280          |
| DC8334C-N                  | 83,340                    | 100,000      | 8,33 ±0,1                   | 25,4 | 132                                           | 55     | 2055                                                     | 2300                                                                  | 1100              | –                                     | 34                                  | 0,270          |
| DC8729A-N                  | 87,290                    | 103,960      | 8,33 ±0,1                   | 16,0 | 134                                           | 58     | 1250                                                     | 2200                                                                  | 1100              | –                                     | 34                                  | 0,165          |
| DC10323A(5C)-N             | 103,231                   | 119,891      | 8,33 ±0,1                   | 16,0 | 155                                           | 68     | 1612                                                     | 1800                                                                  | 900               | 5                                     | 40                                  | 0,205          |
| DC12334C-N                 | 123,34                    | 140,000      | 8,33 ±0,1                   | 25,4 | 184                                           | 80     | 4800                                                     | 1500                                                                  | 750               | –                                     | 50                                  | 0,400          |
| DC12388C(11C)              | 123,881                   | 142,880      | 9,50 ±0,1                   | 25,4 | 186                                           | 80     | 4875                                                     | 1500                                                                  | 750               | 11                                    | 44                                  | 0,400          |

## Ruedas libres de rodillos en poliamida

*Roller type free wheels in polyamide*



| Tipo<br>Type | Tamaño<br>Size | Par máximo de<br>funcionamiento<br>Maximum operating torque | Velocidad límite<br>Overrunning speed of |                            | Dimensiones<br>Dimensions |      |      |      | Masa<br>Weight |
|--------------|----------------|-------------------------------------------------------------|------------------------------------------|----------------------------|---------------------------|------|------|------|----------------|
|              | d              | C op (1)                                                    | Aro interior<br>Inner ring               | Aro exterior<br>Outer ring | DH7                       | dH7  | B1   | B    |                |
|              | [mm]           | [Nm]                                                        | [RPM]                                    | [RPM]                      | [mm]                      | [mm] | [mm] | [mm] |                |
| KI           | 164            | 0,8                                                         | 8000                                     | 10000                      | 16                        | 4    | 10   | 9    | 0,008          |
|              | 165            | 0,8                                                         | 8000                                     | 10000                      | 16                        | 5    | 10   | 9    | 0,007          |
|              | 194            | 0,9                                                         | 7000                                     | 9000                       | 19                        | 4    | 10   | 9    | 0,012          |
|              | 195            | 0,9                                                         | 7000                                     | 9000                       | 19                        | 5    | 10   | 9    | 0,011          |
|              | 196            | 0,9                                                         | 7000                                     | 9000                       | 19                        | 6    | 10   | 9    | 0,010          |
|              | 268*           | 2,9                                                         | 5000                                     | 6000                       | 26                        | 8    | 14   | 13   | 0,023          |
|              | 269*           | 2,9                                                         | 5000                                     | 6000                       | 26                        | 9    | 14   | 13   | 0,021          |
|              | 2610*          | 2,9                                                         | 5000                                     | 6000                       | 26                        | 10   | 14   | 13   | 0,019          |

### NOTAS / Notes

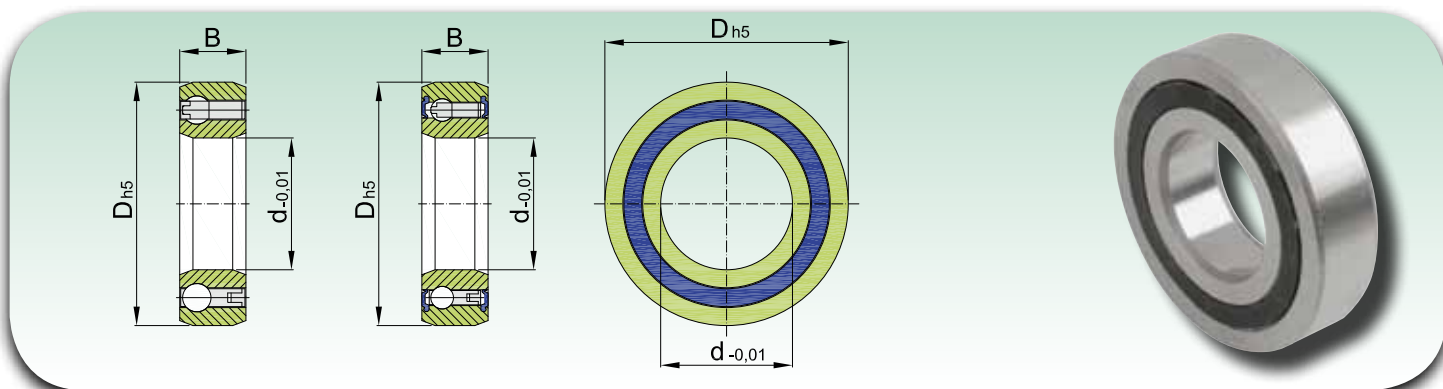
Designación/designation KI+d - ejemplo/example: KI195

1) Cmax = 2 × Cop

|           |     |                               |
|-----------|-----|-------------------------------|
| <b>KK</b> | -   | no blindado / without shields |
|           | 2RS | blindado / shielded           |

## Ruedas libres de rodillos sin ranura

Roller type free wheels without keyway



| Tipo<br>Type   | Tamaño<br>Size | Dimensiones<br>Dimensions |           | Par máximo<br>de funcionamiento<br>Maximum operating<br>torque | Velocidad<br>límite<br>Overrunning<br>speed | Serie<br>rodamientos<br>Bearing<br>series | Cargas rodamiento<br>Bearing loads |                    | Peso<br>Weight | Par de arrastre<br>Drag torque |
|----------------|----------------|---------------------------|-----------|----------------------------------------------------------------|---------------------------------------------|-------------------------------------------|------------------------------------|--------------------|----------------|--------------------------------|
|                |                |                           |           |                                                                |                                             |                                           | dinámico<br>dynamic                | estático<br>static |                |                                |
|                |                |                           |           |                                                                |                                             |                                           | C                                  | C0                 |                |                                |
|                | d<br>[mm]      | D<br>[mm]                 | B<br>[mm] | C op (1)<br>[Nm]                                               | n max<br>[RPM]                              |                                           | [kN]                               | [kN]               | [kg]           | C dr<br>[Ncm]                  |
| <b>KK</b>      | 8              | 22                        | 9         | 2,5                                                            | 15000                                       | no std                                    | 3,28                               | 0,86               | 0,015          | 0,5                            |
|                | 12             | 32                        | 10        | 9,3                                                            | 10000                                       | 6201                                      | 6,1                                | 2,77               | 0,04           | 0,7                            |
|                | 15             | 35                        | 11        | 17                                                             | 8400                                        | 6202                                      | 7,4                                | 3,42               | 0,06           | 0,9                            |
|                | 17             | 40                        | 12        | 30                                                             | 7350                                        | 6203                                      | 7,9                                | 3,8                | 0,070          | 1,1                            |
|                | 20             | 47                        | 14        | 50                                                             | 6000                                        | 6204                                      | 9,4                                | 4,46               | 0,110          | 1,3                            |
|                | 25             | 52                        | 15        | 85                                                             | 5200                                        | 6205                                      | 10,7                               | 5,46               | 0,140          | 2,0                            |
|                | 30             | 62                        | 16        | 138                                                            | 4200                                        | 6206                                      | 11,7                               | 6,45               | 0,210          | 4,4                            |
|                | 35             | 72                        | 17        | 175                                                            | 3600                                        | 6207                                      | 12,6                               | 7,28               | 0,300          | 5,8                            |
| <b>KK..2RS</b> | 40             | 80                        | 22        | 325                                                            | 3000                                        | no std                                    | 15,54                              | 12,25              | 0,5            | 7,0                            |
|                | 8              | 22                        | 9         | 2,5                                                            | 15000                                       | no std                                    | 3,28                               | 0,86               | 0,015          | 0,8                            |
|                | 12             | 32                        | 14        | 9,3                                                            | 10000                                       | no std                                    | 6,1                                | 2,77               | 0,05           | 3,0                            |
|                | 15             | 35                        | 16        | 17                                                             | 8400                                        | no std                                    | 7,4                                | 3,42               | 0,070          | 4,0                            |
|                | 17             | 40                        | 17        | 30                                                             | 7350                                        | no std                                    | 7,9                                | 3,8                | 0,09           | 5,6                            |
|                | 20             | 47                        | 19        | 50                                                             | 6000                                        | no std                                    | 9,4                                | 4,46               | 0,145          | 6,0                            |
|                | 25             | 52                        | 20        | 85                                                             | 5200                                        | no std                                    | 10,7                               | 5,46               | 0,175          | 6,0                            |
|                | 30             | 62                        | 21        | 138                                                            | 4200                                        | no std                                    | 11,7                               | 6,45               | 0,270          | 7,5                            |
|                | 35             | 72                        | 22        | 175                                                            | 3600                                        | no std                                    | 12,6                               | 7,28               | 0,400          | 8,2                            |
|                | 40             | 80                        | 27        | 325                                                            | 3000                                        | no std                                    | 15,54                              | 12,25              | 0,6            | 10                             |

### NOTAS / Notes

Designación/designation KK+d - ejemplo/example: KK20

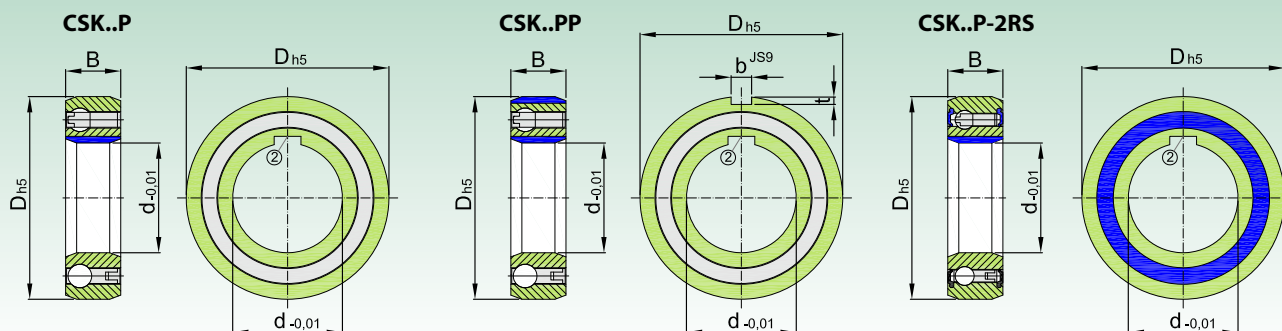
1) Cmax = 2 × Cop



**KK**
**..P**
**ranura en aro interior / keyway on inner ring**
**..PP**
**ranura en aro interior/ y exterior**  
*keyway on outer and inner ring*
**..P-2RS**
**ranura en aro interior con blindaje**  
*keyway on inner ring, shielded*


## Ruedas libres de rodillos con ranura

*Roller type free wheels with keyway*



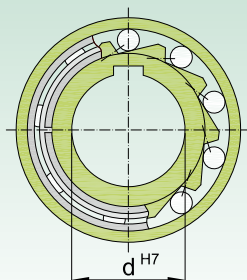
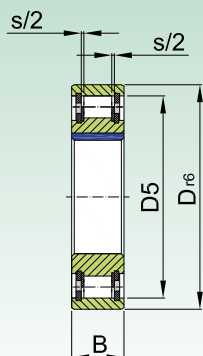
| Tipo<br>Type      | Tamaño<br>Size    | Dimensiones<br>Dimensions |           |           |           | Par máximo máximo<br>de funcionamiento<br>Maximum operating<br>torque | Velocidad límite<br>Overrunning<br>speed | Serie<br>rodamientos<br>Bearing series | Cargas rodamiento<br>Bearing loads |                    | Peso<br>Weight | Par de arrastre<br>Drag torque |
|-------------------|-------------------|---------------------------|-----------|-----------|-----------|-----------------------------------------------------------------------|------------------------------------------|----------------------------------------|------------------------------------|--------------------|----------------|--------------------------------|
|                   | d<br>[mm]         | D<br>[mm]                 | B<br>[mm] | b<br>[mm] | t<br>[mm] | C op (1)<br>[Nm]                                                      | n max<br>[RPM]                           |                                        | dinamico<br>dynamic                | estático<br>static |                | C dr<br>[Ncm]                  |
|                   |                   |                           |           |           |           |                                                                       |                                          |                                        | C<br>[kN]                          | C0<br>[kN]         |                |                                |
|                   |                   |                           |           |           |           |                                                                       |                                          |                                        |                                    |                    |                |                                |
| KK..P             | 12                | 32                        | 10        | -         | -         | 9,3                                                                   | 10000                                    | 6201                                   | 6,1                                | 2,77               | 0,04           | 0,7                            |
|                   | 15                | 35                        | 11        | -         | -         | 17                                                                    | 8400                                     | 6202                                   | 7,4                                | 3,42               | 0,06           | 0,9                            |
|                   | 17                | 40                        | 12        | -         | -         | 30                                                                    | 7350                                     | 6203                                   | 7,9                                | 3,8                | 0,070          | 1,1                            |
|                   | 20                | 47                        | 14        | -         | -         | 50                                                                    | 6000                                     | 6204                                   | 9,4                                | 4,46               | 0,110          | 1,3                            |
|                   | 25                | 52                        | 15        | -         | -         | 85                                                                    | 5200                                     | 6205                                   | 10,7                               | 5,46               | 0,140          | 2,0                            |
|                   | 30                | 62                        | 16        | -         | -         | 138                                                                   | 4200                                     | 6206                                   | 11,7                               | 6,45               | 0,210          | 4,4                            |
|                   | 35                | 72                        | 17        | -         | -         | 175                                                                   | 3600                                     | 6207                                   | 12,6                               | 7,28               | 0,300          | 5,8                            |
|                   | 40 <sup>(2)</sup> | 80                        | 22        | -         | -         | 325                                                                   | 3000                                     | -                                      | 15,54                              | 12,25              | 0,5            | 7,0                            |
| KK..PP            | 15                | 35                        | 11        | 2         | 0,6       | 17                                                                    | 8400                                     | 6202                                   | 7,4                                | 3,42               | 0,06           | 0,9                            |
|                   | 17                | 40                        | 12        | 2         | 1,0       | 30                                                                    | 7350                                     | 6203                                   | 7,9                                | 3,8                | 0,070          | 1,1                            |
|                   | 20                | 47                        | 14        | 3         | 1,5       | 50                                                                    | 6000                                     | 6204                                   | 9,4                                | 4,46               | 0,110          | 1,3                            |
|                   | 25                | 52                        | 15        | 6         | 2,0       | 85                                                                    | 5200                                     | 6205                                   | 10,7                               | 5,46               | 0,140          | 2,0                            |
|                   | 30                | 62                        | 16        | 6         | 2,0       | 138                                                                   | 4200                                     | 6206                                   | 11,7                               | 6,45               | 0,210          | 4,4                            |
|                   | 35                | 72                        | 17        | 8         | 2,5       | 175                                                                   | 3600                                     | 6207                                   | 12,6                               | 7,28               | 0,300          | 5,8                            |
|                   | 40 <sup>(2)</sup> | 80                        | 22        | 10        | 3,0       | 325                                                                   | 3000                                     | -                                      | 15,54                              | 12,25              | 0,5            | 7,0                            |
|                   | KK..P-2RS         | 12                        | 32        | 14        | -         | -                                                                     | 9,3                                      | 10000                                  | -                                  | 6,1                | 2,77           | 0,05                           |
| 15                |                   | 35                        | 16        | -         | -         | 17                                                                    | 8400                                     | -                                      | 7,4                                | 3,42               | 0,07           | 4                              |
| 17                |                   | 40                        | 17        | -         | -         | 30                                                                    | 7350                                     | -                                      | 7,9                                | 3,8                | 0,09           | 5,6                            |
| 20                |                   | 47                        | 19        | -         | -         | 50                                                                    | 6000                                     | -                                      | 9,4                                | 4,46               | 0,145          | 6,0                            |
| 25                |                   | 52                        | 20        | -         | -         | 85                                                                    | 5200                                     | -                                      | 10,7                               | 5,46               | 0,175          | 6,0                            |
| 30                |                   | 62                        | 21        | -         | -         | 138                                                                   | 4200                                     | -                                      | 11,7                               | 6,45               | 0,270          | 7,5                            |
| 35                |                   | 72                        | 22        | -         | -         | 175                                                                   | 3600                                     | -                                      | 12,6                               | 7,28               | 0,4            | 8,2                            |
| 40 <sup>(2)</sup> |                   | 80                        | 27        | -         | -         | 325                                                                   | 3000                                     | -                                      | 15,54                              | 12,25              | 0,6            | 10                             |



# NSS (AS)

## Ruedas libres de rodillos con ranura interna

Roller type free wheel with inner keyway



| Tipo<br>Type | Tamaño<br>Size | Dimensiones<br>Dimensions |      |      |      | Par máximo de<br>funcionamiento<br>Maximum operating<br>torque | Velocidad limite<br>Overrunning speed of |                            | Peso<br>Weight | Par de arrastre<br>Drag torque |
|--------------|----------------|---------------------------|------|------|------|----------------------------------------------------------------|------------------------------------------|----------------------------|----------------|--------------------------------|
|              | d H7           | D r6                      | D5   | B    | s    | C op (1)                                                       | Aro interior<br>Inner ring               | Aro exterior<br>Outer ring | [kg]           | C dr<br>[Ncm]                  |
|              | [mm]           | [mm]                      | [mm] | [mm] | [mm] | [Nm]                                                           | [RPM]                                    | [RPM]                      |                |                                |
| NSS (AS)     | 6              | 19                        | 15,8 | 6    | 0,3  | 2,10                                                           | 5000                                     | 7500                       | 0,01           | 0,18                           |
|              | 8              | 24                        | 20   | 8    | 1,3  | 3,8                                                            | 4300                                     | 6500                       | 0,02           | 0,24                           |
|              | 10             | 30                        | 25,9 | 9    | 1,3  | 6,8                                                            | 3500                                     | 5200                       | 0,03           | 0,36                           |
|              | 12             | 32                        | 28   | 10   | 1,3  | 13                                                             | 3200                                     | 4800                       | 0,04           | 0,48                           |
|              | 15             | 35                        | 31   | 11   | 1,4  | 14                                                             | 2800                                     | 4300                       | 0,05           | 0,70                           |
|              | 20             | 47                        | 40   | 14   | 2,4  | 40                                                             | 2200                                     | 3300                       | 0,12           | 1,4                            |
|              | 25             | 52                        | 45,9 | 15   | 2,4  | 56                                                             | 1900                                     | 2900                       | 0,14           | 2,4                            |
|              | 30             | 62                        | 55   | 16   | 2,4  | 90                                                             | 1600                                     | 2400                       | 0,22           | 7,8                            |
|              | 35             | 72                        | 64   | 17   | 2,5  | 143                                                            | 1300                                     | 2000                       | 0,31           | 9,0                            |
|              | 40             | 80                        | 72   | 18   | 2,5  | 185                                                            | 1200                                     | 1800                       | 0,39           | 10                             |
|              | 45             | 85                        | 77   | 19   | 2,5  | 218                                                            | 1000                                     | 1600                       | 0,44           | 11                             |
|              | 50             | 90                        | 82   | 20   | 2,5  | 230                                                            | 950                                      | 1500                       | 0,49           | 13                             |
|              | 55             | 100                       | 90   | 21   | 2,5  | 308                                                            | 800                                      | 1300                       | 0,66           | 14                             |
|              | 60             | 110                       | 100  | 22   | 2,5  | 508                                                            | 700                                      | 1100                       | 0,81           | 26                             |
|              | 80             | 140                       | 128  | 26   | 2,5  | 1063                                                           | 600                                      | 900                        | 1,41           | 58                             |

### NOTAS / Notes

Designación/Designation NSS+d ejemplo/ example: NSS15

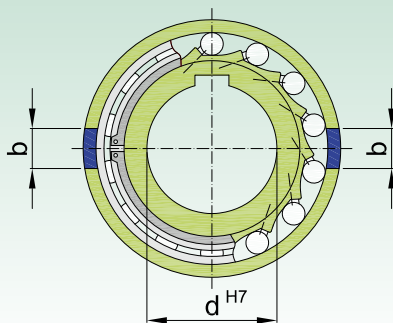
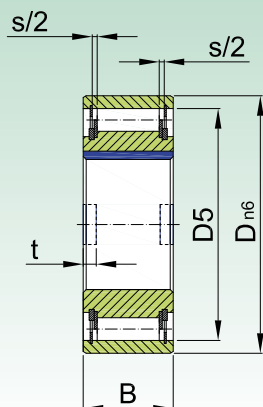
Dimensiones de montaje idénticas a rodamientos de bolas serie 62 / Mounting dimensions are identical to ball bearings series 62

NSS6 sin ranura / without keyway ØD = 0/-009

## NFS (ASNU)

## Ruedas libres de rodillos con ranuras

Roller type free wheel with keyways



| Tipo<br>Type | Tamaño<br>Size | Dimensiones<br>Dimensions |      |      |      |      |      | Par máximo de<br>funcionamiento<br>Maximum operating<br>torque | Velocidad límite<br>Overrunning speed of |                            | Peso<br>Weight | Par de arrastre<br>Drag torque |
|--------------|----------------|---------------------------|------|------|------|------|------|----------------------------------------------------------------|------------------------------------------|----------------------------|----------------|--------------------------------|
|              | d H7           | D n6                      | B    | D 5  | b    | t    | s    | C op (1)                                                       | Aro interior<br>Inner ring               | Aro exterior<br>Outer ring | [kg]           | C dr                           |
|              | [mm]           | [mm]                      | [mm] | [mm] | [mm] | [mm] | [mm] | [Nm]                                                           | [RPM]                                    | [RPM]                      |                |                                |
| NFS (ASNU)   | 8              | 35                        | 13   | 28   | 4    | 1,4  | 2,4  | 12                                                             | 3300                                     | 5000                       | 0,07           | 1,6                            |
|              | 12             | 35                        | 13   | 28   | 4    | 1,4  | 2,4  | 12                                                             | 3300                                     | 5000                       | 0,06           | 1,6                            |
|              | 15             | 42                        | 18   | 37   | 5    | 1,8  | 2,4  | 30                                                             | 2400                                     | 3600                       | 0,11           | 1,9                            |
|              | 17             | 47                        | 19   | 40   | 5    | 2,3  | 2,4  | 49                                                             | 2300                                     | 3400                       | 0,15           | 1,9                            |
|              | 20             | 52                        | 21   | 42   | 6    | 2,3  | 2,4  | 78                                                             | 2100                                     | 3100                       | 0,19           | 1,9                            |
|              | 25             | 62                        | 24   | 51   | 8    | 2,8  | 2,4  | 125                                                            | 1700                                     | 2600                       | 0,38           | 5,6                            |
|              | 30             | 72                        | 27   | 60   | 10   | 2,5  | 2,4  | 255                                                            | 1400                                     | 2200                       | 0,54           | 14                             |
|              | 35             | 80                        | 31   | 70   | 12   | 3,5  | 2,4  | 383                                                            | 1200                                     | 1900                       | 0,74           | 16                             |
|              | 40             | 90                        | 33   | 78   | 12   | 4,1  | 2,5  | 538                                                            | 1100                                     | 1700                       | 0,92           | 38                             |
|              | 45             | 100                       | 36   | 85   | 14   | 4,6  | 2,5  | 780                                                            | 1000                                     | 1600                       | 1,31           | 43                             |
|              | 50             | 110                       | 40   | 92   | 14   | 5,6  | 2,5  | 1013                                                           | 850                                      | 1350                       | 1,74           | 55                             |
|              | 60             | 130                       | 46   | 110  | 18   | 5,5  | 3,6  | 1825                                                           | 750                                      | 1050                       | 2,77           | 110                            |
|              | 70             | 150                       | 51   | 125  | 20   | 6,9  | 3,6  | 2300                                                           | 600                                      | 950                        | 4,16           | 140                            |
|              | 80             | 170                       | 58   | 140  | 20   | 7,5  | 3,6  | 3275                                                           | 550                                      | 850                        | 6,09           | 180                            |
|              | 90             | 190                       | 64   | 160  | 20   | 8,0  | 3,6  | 5325                                                           | 500                                      | 750                        | 8,2            | 230                            |
|              | 100            | 215                       | 73   | 175  | 24   | 8,5  | 3,6  | 7250                                                           | 450                                      | 680                        | 12,6           | 380                            |
|              | 120            | 260                       | 86   | 215  | 28   | 10   | 3,6  | 13500                                                          | 370                                      | 550                        | 22             | 650                            |
|              | 150            | 320                       | 108  | 260  | 32   | 12   | 3,6  | 26625                                                          | 300                                      | 460                        | 42             | 1000                           |
|              | 200            | 420                       | 138  | 350  | 45   | 16   | 7,6  | 44500                                                          | 230                                      | 350                        | 93             | 2000                           |

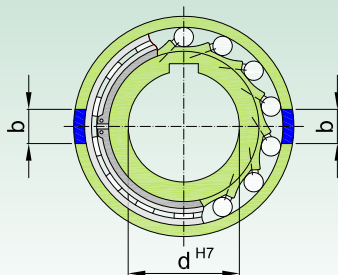
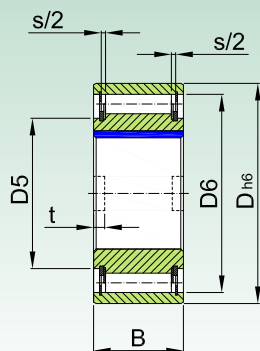
## NOTAS / Notes

Designación/Designation NFS+d - ejemplo/ example: NFS50

1) Cmax = 2 × C op

## Ruedas libres de rodillos con ranuras

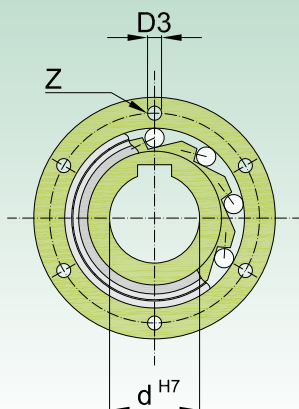
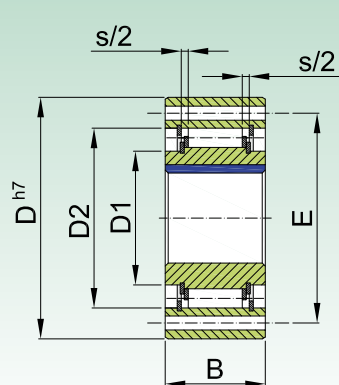
*Roller type free wheel with keyways*



| Tipo<br>Type | Tamaño<br>Size | Dimensiones<br>Dimensions |      |      |      |      |       |      | Par máximo de<br>funcionamiento<br>Maximum operating<br>torque | Velocidad límite<br>Overrunning speed of |                            | Peso<br>Weight | Par de arrastre<br>Drag torque |
|--------------|----------------|---------------------------|------|------|------|------|-------|------|----------------------------------------------------------------|------------------------------------------|----------------------------|----------------|--------------------------------|
|              | d H7           | Dh6                       | D6   | D5   | B    | s    | b H11 | t    | C op (1)                                                       | Aro interior<br>Inner ring               | Aro exterior<br>Outer ring | [kg]           | C dr                           |
|              | [mm]           | [mm]                      | [mm] | [mm] | [mm] | [mm] | [mm]  | [mm] | [Nm]                                                           | [RPM]                                    | [RPM]                      |                | [Ncm]                          |
| AE           | 12             | 37                        | 28   | 20   | 20   | 4,5  | 6     | 3    | 17                                                             | 3100                                     | 6000                       | 0,11           | 0,7                            |
|              | 15             | 47                        | 37   | 26   | 30   | 4,5  | 7     | 3,5  | 55                                                             | 2300                                     | 5400                       | 0,30           | 3,5                            |
|              | 20             | 62                        | 50   | 35   | 34   | 5,5  | 8     | 3,5  | 146                                                            | 2000                                     | 3600                       | 0,55           | 8,4                            |
|              | 25             | 80                        | 68   | 45   | 37   | 6,5  | 9     | 4    | 285                                                            | 1700                                     | 2600                       | 0,98           | 14                             |
|              | 30             | 90                        | 75   | 50   | 44   | 6,2  | 12    | 5    | 500                                                            | 1500                                     | 2100                       | 1,50           | 23                             |
|              | 35             | 100                       | 80   | 55   | 48   | 3,8  | 13    | 6    | 720                                                            | 1300                                     | 1950                       | 2,00           | 60                             |
|              | 40             | 110                       | 90   | 60   | 56   | 3,8  | 15    | 7    | 1030                                                           | 1200                                     | 1700                       | 2,80           | 72                             |
|              | 45             | 120                       | 95   | 65   | 56   | 3,8  | 16    | 7    | 1125                                                           | 1050                                     | 1600                       | 3,30           | 140                            |
|              | 50             | 130                       | 110  | 75   | 63   | 5,8  | 17    | 8    | 2150                                                           | 950                                      | 1300                       | 4,20           | 180                            |
|              | 55             | 140                       | 115  | 82   | 67   | 3,8  | 18    | 9    | 2675                                                           | 850                                      | 1200                       | 5,20           | 190                            |
|              | 60             | 150                       | 125  | 90   | 78   | 7,6  | 18    | 9    | 3500                                                           | 800                                      | 1100                       | 6,80           | 240                            |
|              | 70             | 170                       | 140  | 100  | 95   | 7,6  | 20    | 9    | 5813                                                           | 650                                      | 900                        | 10,5           | 320                            |

## Ruedas libres de rodillos con ranura y orificios de fijación

*Roller type free wheel with keyway and fixing holes*



| Tipo<br>Type | Tamaño<br>Size | Par máximo de<br>funcionamiento<br>Maximum<br>operating torque | Velocidad limite<br>Overrunning speed of |                            | Dimensiones<br>Dimensions |      |      |      |      |    |      |      | Peso<br>Weight | Par de arrastre<br>Drag torque |
|--------------|----------------|----------------------------------------------------------------|------------------------------------------|----------------------------|---------------------------|------|------|------|------|----|------|------|----------------|--------------------------------|
|              | d              | C op (1)                                                       | Aro interior<br>Inner ring               | Aro exterior<br>Outer ring | Dh7                       | B    | D2   | D1   | E    | Z  | D3   | s    |                | C dr                           |
|              | [mm]           | [Nm]                                                           | [RPM]                                    | [RPM]                      | [mm]                      | [mm] | [mm] | [mm] | [mm] | -  | [mm] | [mm] |                | [Ncm]                          |
| AA           | 12             | 17                                                             | 3100                                     | 6000                       | 47                        | 20   | 28   | 20   | 38   | 3  | 5,5  | 4,5  | 0,21           | 0,7                            |
|              | 15             | 55                                                             | 2300                                     | 5400                       | 55                        | 30   | 37   | 26   | 45   | 3  | 5,5  | 4,5  | 0,44           | 3,5                            |
|              | 20             | 146                                                            | 2000                                     | 3600                       | 68                        | 34   | 50   | 35   | 58   | 4  | 5,5  | 5,5  | 0,70           | 8,4                            |
|              | 25             | 285                                                            | 1700                                     | 2600                       | 90                        | 37   | 68   | 45   | 78   | 6  | 5,5  | 6,5  | 1,30           | 14                             |
|              | 30             | 500                                                            | 1500                                     | 2100                       | 100                       | 44   | 75   | 50   | 87   | 6  | 6,6  | 6,5  | 2,00           | 23                             |
|              | 35             | 720                                                            | 1300                                     | 1950                       | 110                       | 48   | 80   | 55   | 96   | 6  | 6,6  | 6,5  | 2,60           | 60                             |
|              | 40             | 1030                                                           | 1200                                     | 1700                       | 125                       | 56   | 90   | 60   | 108  | 6  | 9    | 7,6  | 3,90           | 72                             |
|              | 45             | 1125                                                           | 1050                                     | 1500                       | 130                       | 56   | 95   | 65   | 112  | 8  | 9    | 7,6  | 4,00           | 140                            |
|              | 50             | 2150                                                           | 950                                      | 1300                       | 150                       | 63   | 110  | 75   | 132  | 8  | 9    | 7,6  | 6,00           | 180                            |
|              | 55             | 2675                                                           | 850                                      | 1200                       | 160                       | 67   | 115  | 82   | 138  | 8  | 11   | 7,6  | 7,20           | 190                            |
|              | 60             | 3500                                                           | 800                                      | 1100                       | 170                       | 78   | 125  | 90   | 150  | 10 | 11   | 7,6  | 9,20           | 240                            |
|              | 70             | 5813                                                           | 650                                      | 900                        | 190                       | 95   | 140  | 100  | 165  | 10 | 11   | 7,6  | 11,8           | 320                            |

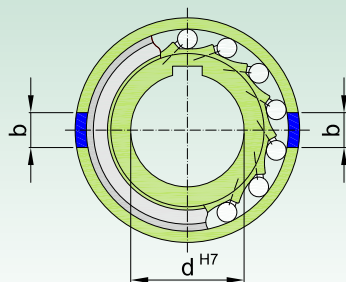
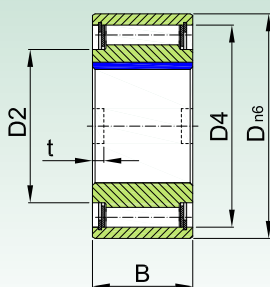
### NOTAS / Notes

Designación/Designation AA+d - ejemplo/ example: AA100

1)  $C_{max} = 2 \times C_{op}$

## Ruedas libres de rodillos con ranuras

*Roller type free wheel with keyways*



| Tipo<br>Type | Tamaño<br>Size | Dimensiones<br>Dimensions |      |      |      |      |       | Par máximo de<br>funcionamiento<br>Maximum operating torque | Velocidad límite<br>Overrunning speed of race |                            | Peso<br>Weight |
|--------------|----------------|---------------------------|------|------|------|------|-------|-------------------------------------------------------------|-----------------------------------------------|----------------------------|----------------|
|              | d H7           | Dn6                       | D4   | D2   | B    | t    | b H11 | C op (1)                                                    | Aro interior<br>Inner ring                    | Aro exterior<br>Outer ring | [kg]           |
|              | [mm]           | [mm]                      | [mm] | [mm] | [mm] | [mm] | [mm]  | [Nm]                                                        | [RPM]                                         | [RPM]                      |                |
| NF           | 8              | 37                        | 30   | 20   | 20   | 3    | 6     | 20                                                          | 5000                                          | 6000                       | 0,1            |
|              | 12             | 37                        | 30   | 20   | 20   | 3    | 6     | 20                                                          | 5000                                          | 6000                       | 0,1            |
|              | 15             | 47                        | 37   | 26   | 30   | 3,5  | 7     | 78                                                          | 4500                                          | 5400                       | 0,3            |
|              | 20             | 62                        | 52   | 37   | 36   | 3,5  | 8     | 188                                                         | 3000                                          | 3600                       | 0,6            |
|              | 25             | 80                        | 68   | 49   | 40   | 4    | 9     | 250                                                         | 2200                                          | 2600                       | 1,1            |
|              | 30             | 90                        | 75   | 52,5 | 48   | 5    | 12    | 500                                                         | 1800                                          | 2100                       | 1,6            |
|              | 35             | 100                       | 80   | 58   | 53   | 6    | 13    | 663                                                         | 1600                                          | 1950                       | 2,3            |
|              | 40             | 110                       | 90   | 62   | 63   | 7    | 15    | 1100                                                        | 1250                                          | 1700                       | 3,1            |
|              | 45             | 120                       | 95   | 69   | 63   | 7    | 16    | 1500                                                        | 1100                                          | 1500                       | 3,7            |
|              | 50             | 130                       | 110  | 82   | 80   | 8,5  | 17    | 2375                                                        | 850                                           | 1300                       | 5,4            |
|              | 55             | 140                       | 115  | 83   | 80   | 9    | 18    | 2500                                                        | 800                                           | 1200                       | 6,1            |
|              | 60             | 150                       | 125  | 93,5 | 95   | 9    | 18    | 4250                                                        | 700                                           | 1100                       | 8,5            |
|              | 70             | 170                       | 140  | 106  | 110  | 9    | 20    | 5875                                                        | 620                                           | 900                        | 13,0           |
|              | 80             | 190                       | 160  | 122  | 125  | 9    | 20    | 10000                                                       | 550                                           | 800                        | 18,0           |
|              | 90             | 215                       | 180  | 133  | 140  | 11,5 | 24    | 17250                                                       | 480                                           | 700                        | 25,3           |
|              | 100            | 260                       | 210  | 157  | 150  | 14,5 | 28    | 19625                                                       | 400                                           | 600                        | 42,1           |
|              | 130            | 300                       | 240  | 188  | 180  | 17   | 32    | 34750                                                       | 300                                           | 480                        | 65,0           |
|              | 150            | 320                       | 260  | 205  | 180  | 17   | 32    | 44375                                                       | 250                                           | 400                        | 95,0           |

### NOTAS / Notes

Designación/Designation NF+d - ejemplo/ example: NF100

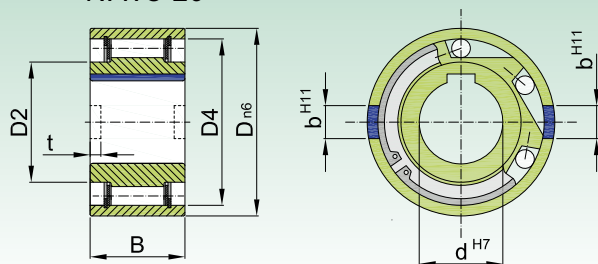
1)  $C_{max} = 2 \times C_{op}$

NFR

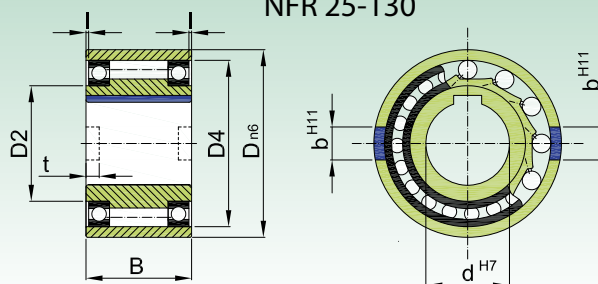
**Ruedas libres de rodillos con ranuras autoportadas por rodamientos de bolas**  
*Roller type free wheel with keyways, self-supported by ball bearings*



NFR 8-20



NFR 25-130



| Tipo<br>Type | Tamaño<br>Size | Par máximo de<br>funcionamiento<br>Maximum operating torque | Velocidad limite<br>Overrunning speed of race |                            | Serie<br>rodamientos<br>Bearing<br>series | Dimensiones<br>Dimensions |      |      |      |      |      |       | Peso<br>Weight |
|--------------|----------------|-------------------------------------------------------------|-----------------------------------------------|----------------------------|-------------------------------------------|---------------------------|------|------|------|------|------|-------|----------------|
|              | d H7           | C op (1)                                                    | Aro interior<br>Inner ring                    | Aro exterior<br>Outer ring |                                           | Dn6                       | D4   | D2   | B    | l    | t    | b H11 |                |
| "NFR"        | [mm]           | [Nm]                                                        | [RPM]                                         | [RPM]                      |                                           | [mm]                      | [mm] | [mm] | [mm] | [mm] | [mm] | [mm]  | [kg]           |
| NFR          | 8              | 20                                                          | 1000                                          | 1000                       | *                                         | 37                        | 30   | 20   | 20   |      | 3    | 6     | 0,1            |
|              | 12             | 20                                                          | 1000                                          | 1000                       | *                                         | 37                        | 30   | 20   | 20   |      | 3    | 6     | 0,1            |
|              | 15             | 78                                                          | 850                                           | 850                        | *                                         | 47                        | 37   | 26   | 30   |      | 3,5  | 7     | 0,3            |
|              | 20             | 188                                                         | 650                                           | 650                        | *                                         | 62                        | 52   | 37   | 36   |      | 3,5  | 8     | 0,6            |
|              | 25             | 250                                                         | 2100                                          | 3600                       | 16008**                                   | 80                        | 68   | 40   | 40   | 0,2  | 4    | 9     | 1,2            |
|              | 30             | 500                                                         | 1700                                          | 3200                       | 16009**                                   | 90                        | 75   | 45   | 48   | 0,2  | 5    | 12    | 1,8            |
|              | 35             | 663                                                         | 1550                                          | 3000                       | 16010**                                   | 100                       | 80   | 50   | 53   | 1,2  | 6    | 13    | 2,4            |
|              | 40             | 1100                                                        | 1150                                          | 2600                       | 16011**                                   | 110                       | 90   | 55   | 63   | 2,2  | 7    | 15    | 3,3            |
|              | 45             | 1500                                                        | 1000                                          | 2400                       | 16012**                                   | 120                       | 95   | 60   | 63   | 2,2  | 7    | 16    | 4,0            |
|              | 50             | 2375                                                        | 800                                           | 2150                       | 16014**                                   | 130                       | 110  | 70   | 80   | 2,7  | 8,5  | 17    | 5,7            |
|              | 55             | 2550                                                        | 750                                           | 2000                       | 16015**                                   | 140                       | 115  | 75   | 80   | 4,2  | 9    | 18    | 6,5            |
|              | 60             | 4250                                                        | 650                                           | 1900                       | 16016**                                   | 150                       | 125  | 80   | 95   | 3,2  | 9    | 18    | 8,9            |
|              | 70             | 5875                                                        | 550                                           | 1750                       | 16018**                                   | 170                       | 140  | 90   | 110  | 1,1  | 9    | 20    | 13,5           |
|              | 80             | 10000                                                       | 500                                           | 1600                       | 16021**                                   | 190                       | 160  | 105  | 125  | 0    | 9    | 20    | 19,0           |
|              | 90             | 17250                                                       | 450                                           | 1450                       | 16024**                                   | 215                       | 180  | 120  | 140  | 0,6  | 11,5 | 24    | 27,2           |
|              | 100            | 19625                                                       | 350                                           | 1250                       | 16028**                                   | 260                       | 210  | 140  | 150  | 2,6  | 14,5 | 28    | 44,5           |
|              | 130            | 34750                                                       | 250                                           | 1000                       | 16032**                                   | 300                       | 240  | 160  | 180  | 2    | 17,5 | 32    | 68,0           |

## NOTAS / Notes

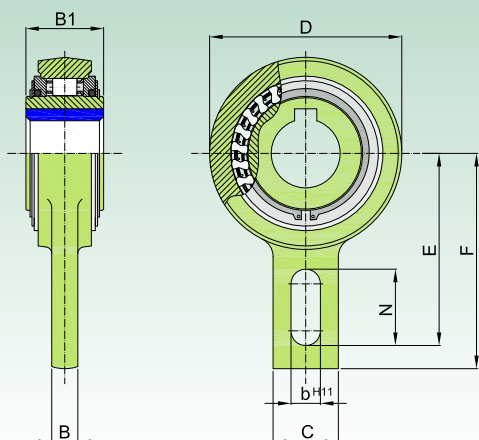
Designación / Designation NFR+d - ejemplo/ example: NFR100

1)  $C_{max} = 2 \times C_{op}$

\*) Con jaulas de rodillos de contacto / with plain bearing steel on steel

\*\*) Con 2 rodamientos de bolas serie 160.. / With 2 ball bearings series 160..

**Ruedas libres de excéntricas para montaje exterior con ranura interior, estanca**  
*Sprag type free wheel with inner keyway for external mounting, sealed*



| Tipo<br>Type | Tamaño<br>Size | Dimensiones<br>Dimensions |      |      |       |      |      |      |      | Par máximo de<br>funcionamiento<br>Maximum operating torque | Velocidad límite<br>Overrunning<br>speed | Peso<br>Weight |
|--------------|----------------|---------------------------|------|------|-------|------|------|------|------|-------------------------------------------------------------|------------------------------------------|----------------|
|              | d H7           | D                         | B1   | F    | E     | C    | N    | B    | bH11 | C op (1)                                                    |                                          |                |
|              | [mm]           | [mm]                      | [mm] | [mm] | [mm]  | [mm] | [mm] | [mm] | [mm] | [Nm]                                                        | [RPM]                                    | [kg]           |
| RSBW         | 20             | 106                       | 35   | 113  | 102,5 | 40   | 35   | 15   | 18   | 375                                                         | 400                                      | 2              |
|              | 25             | 106                       | 48   | 113  | 102,5 | 40   | 35   | 15   | 18   | 606                                                         | 400                                      | 2,6            |
|              | 30             | 106                       | 48   | 113  | 102,5 | 40   | 35   | 15   | 18   | 606                                                         | 400                                      | 2,5            |
|              | 35M            | 106                       | 35   | 113  | 102,5 | 40   | 35   | 15   | 18   | 375                                                         | 400                                      | 2              |
|              | 35             | 106                       | 48   | 113  | 102,5 | 40   | 35   | 15   | 18   | 606                                                         | 400                                      | 2,4            |
|              | 40             | 132                       | 52   | 125  | 115   | 60   | 35   | 15   | 18   | 1295                                                        | 300                                      | 4,6            |
|              | 45             | 132                       | 52   | 125  | 115   | 60   | 35   | 15   | 18   | 1295                                                        | 300                                      | 4,5            |
|              | 50             | 132                       | 52   | 125  | 115   | 60   | 35   | 15   | 18   | 1295                                                        | 300                                      | 4,5            |
|              | 55             | 132                       | 52   | 125  | 115   | 60   | 35   | 15   | 18   | 1295                                                        | 300                                      | 4,4            |
|              | 60             | 161                       | 54   | 140  | 130   | 70   | 35   | 15   | 18   | 2550                                                        | 250                                      | 6,5            |
|              | 70             | 161                       | 54   | 140  | 130   | 70   | 35   | 15   | 18   | 2550                                                        | 250                                      | 6,4            |
|              | 80             | 190                       | 70   | 165  | 150   | 70   | 45   | 20   | 25   | 4875                                                        | 200                                      | 9,9            |
|              | 90             | 190                       | 70   | 165  | 150   | 70   | 45   | 20   | 25   | 4875                                                        | 200                                      | 9,8            |

#### NOTAS / Notes

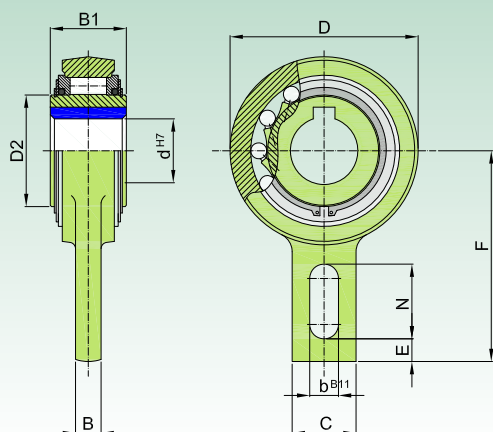
Designación/Designation RSBW+d - ejemplo/ example: RSWB80



AV

## Ruedas libres de rodillos para montaje exterior con ranura interior, estanca

*Roller type free wheel with inner keyway for external mounting, sealed*



| Tipo<br>Type | Tamaño<br>Size | Dimensiones<br>Dimensions |      |      |      |      |      |      |      |      | Par máximo de<br>funcionamiento<br>Maximum operating torque | Velocidad límite<br>Overrunning speed | Peso<br>Weight | Par de arrastre<br>Drag torque |
|--------------|----------------|---------------------------|------|------|------|------|------|------|------|------|-------------------------------------------------------------|---------------------------------------|----------------|--------------------------------|
|              | d              | D                         | D2   | B1   | B    | C    | F    | bB11 | N    | E    | C op (1)                                                    |                                       |                | C dr                           |
|              | [mm]           | [mm]                      | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [Nm]                                                        | [RPM]                                 | [kg]           | [Ncm]                          |
| AV           | 20             | 83                        | 42   | 35   | 12   | 40   | 90   | 15   | 35   | 5    | 265                                                         | 450                                   | 1,3            | 18                             |
|              | 25             | 83                        | 42   | 35   | 12   | 40   | 90   | 15   | 35   | 5    | 265                                                         | 450                                   | 1,3            | 18                             |
|              | 30             | 118                       | 60   | 54   | 15   | 40   | 110  | 15   | 35   | 8    | 1200                                                        | 320                                   | 3,5            | 130                            |
|              | 35             | 118                       | 60   | 54   | 15   | 40   | 110  | 15   | 35   | 8    | 1200                                                        | 320                                   | 3,4            | 130                            |
|              | 40             | 118                       | 60   | 54   | 15   | 40   | 110  | 15   | 35   | 8    | 1200                                                        | 320                                   | 3,3            | 130                            |
|              | 45             | 155                       | 90   | 54   | 20   | 80   | 140  | 18   | 47   | 10   | 2150                                                        | 280                                   | 5,5            | 240                            |
|              | 50             | 155                       | 90   | 54   | 20   | 80   | 140  | 18   | 47   | 10   | 2150                                                        | 280                                   | 5,4            | 240                            |
|              | 55             | 155                       | 90   | 54   | 20   | 80   | 140  | 18   | 47   | 10   | 2150                                                        | 280                                   | 5,3            | 240                            |
|              | 60             | 155                       | 90   | 54   | 20   | 80   | 140  | 18   | 47   | 10   | 2150                                                        | 280                                   | 5,2            | 240                            |
|              | 70             | 155                       | 90   | 54   | 20   | 80   | 140  | 18   | 47   | 10   | 2150                                                        | 280                                   | 5,0            | 240                            |
|              | 80             | 190                       | 110  | 64   | 20   | 80   | 155  | 20   | 40   | 10   | 2900                                                        | 200                                   | 8,7            | 360                            |
|              | 90*            | 260                       | 160  | 90   | 25   | 120  | 220  | –    | –    | –    | 7125                                                        | 150                                   | 24,5           | 360                            |
|              | 100*           | 260                       | 160  | 90   | 25   | 120  | 220  | –    | –    | –    | 7125                                                        | 150                                   | 23,5           | 360                            |
|              | 110*           | 260                       | 160  | 90   | 25   | 120  | 220  | –    | –    | –    | 7125                                                        | 150                                   | 22,5           | 360                            |
|              | 120*           | 300                       | 180  | 110  | 30   | 140  | 260  | –    | –    | –    | 11000                                                       | 130                                   | 42             | 600                            |

### NOTAS / Notes

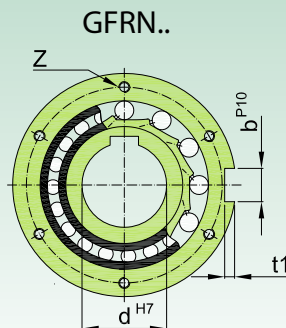
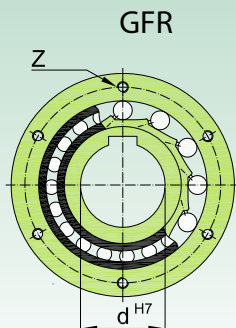
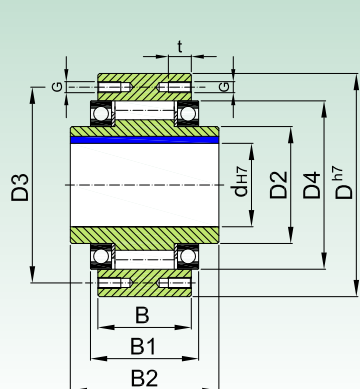
Designación/Designation AV+d - ejemplo/ example: AV45

1)  $C_{max} = 2 \times C_{op}$

\*) n. 2 ranuras a 120° / n. 2 Keyways 120° offset

# GFR (N)

Ruedas libres de rodillos con ranura interior y orificios de fijación, autosportadas por rodamientos  
Roller type free wheel with inner keyway and fixing holes, self-supported by ball bearings



| Tipo<br>Type | Tamaño<br>Size | Par máximo de<br>funcionamiento<br>Maximum<br>operating torque | Velocidad límite<br>Overrunning speed of race |                            | Dimensiones<br>Dimensions |      |      |      |      |      |    |      |      |      |      |      | Peso<br>Weight |
|--------------|----------------|----------------------------------------------------------------|-----------------------------------------------|----------------------------|---------------------------|------|------|------|------|------|----|------|------|------|------|------|----------------|
|              | d H7           | C op (1)                                                       | Aro interior<br>Inner ring                    | Aro exterior<br>Outer ring | Dh7                       | D2   | D4   | D3   | G    | t    | z  | B    | B1   | B2   | t1   | bP10 |                |
|              | [mm]           | [Nm]                                                           | [RPM]                                         | [RPM]                      | [mm]                      | [mm] | [mm] | [mm] | -    | [mm] | -  | [mm] | [mm] | [mm] | [mm] | [mm] |                |
| GFR<br>GFRN  | 12*            | 55                                                             | 4000                                          | 7200                       | 62                        | 20   | 42   | 51   | ø5,5 | -    | 3  | 20   | 27   | 42   | 2,5  | 4    | 0,5            |
|              | 15             | 125                                                            | 3600                                          | 6500                       | 68                        | 25   | 47   | 56   | M5   | 8    | 3  | 28   | 32   | 52   | 3    | 5    | 0,8            |
|              | 20             | 181                                                            | 2700                                          | 5600                       | 75                        | 30   | 55   | 64   | M5   | 8    | 4  | 34   | 39   | 57   | 3,5  | 6    | 1,0            |
|              | 25             | 288                                                            | 2100                                          | 4500                       | 90                        | 40   | 68   | 78   | M6   | 10   | 4  | 35   | 40   | 60   | 4    | 8    | 1,5            |
|              | 30             | 500                                                            | 1700                                          | 4100                       | 100                       | 45   | 75   | 87   | M6   | 10   | 6  | 43   | 48   | 68   | 4    | 8    | 2,2            |
|              | 35             | 725                                                            | 1550                                          | 3800                       | 110                       | 50   | 80   | 96   | M6   | 12   | 6  | 45   | 51   | 74   | 5    | 10   | 3,0            |
|              | 40             | 1025                                                           | 1150                                          | 3400                       | 125                       | 55   | 90   | 108  | M8   | 14   | 6  | 53   | 59   | 86   | 5    | 12   | 4,6            |
|              | 45             | 1125                                                           | 1000                                          | 3200                       | 130                       | 60   | 95   | 112  | M8   | 14   | 8  | 53   | 59   | 86   | 5,5  | 14   | 4,7            |
|              | 50             | 2125                                                           | 800                                           | 2800                       | 150                       | 70   | 110  | 132  | M8   | 14   | 8  | 64   | 72   | 94   | 5,5  | 14   | 7,2            |
|              | 55             | 2625                                                           | 750                                           | 2650                       | 160                       | 75   | 115  | 138  | M10  | 16   | 8  | 66   | 72   | 104  | 6    | 16   | 8,6            |
|              | 60             | 3500                                                           | 650                                           | 2450                       | 170                       | 80   | 125  | 150  | M10  | 16   | 10 | 78   | 89   | 114  | 7    | 18   | 10,5           |
|              | 70             | 5750                                                           | 550                                           | 2150                       | 190                       | 90   | 140  | 165  | M10  | 16   | 10 | 95   | 108  | 134  | 7,5  | 20   | 13,5           |
|              | 80             | 8500                                                           | 500                                           | 1900                       | 210                       | 105  | 160  | 185  | M10  | 16   | 10 | 100  | 108  | 144  | 9    | 22   | 18,2           |
|              | 90             | 14500                                                          | 450                                           | 1700                       | 230                       | 120  | 180  | 206  | M12  | 20   | 10 | 115  | 125  | 158  | 9    | 25   | 28,5           |
|              | 100            | 20000                                                          | 350                                           | 1450                       | 270                       | 140  | 210  | 240  | M16  | 24   | 10 | 120  | 131  | 182  | 10   | 28   | 42,5           |
|              | 130            | 31250                                                          | 250                                           | 1250                       | 310                       | 160  | 240  | 278  | M16  | 24   | 12 | 152  | 168  | 212  | 11   | 32   | 65,0           |
|              | 150            | 70000                                                          | 200                                           | 980                        | 400                       | 200  | 310  | 360  | M20  | 32   | 12 | 180  | 194  | 246  | 12   | 36   | 138,0          |

## NOTAS / Notes

Designación/Designation GFR(N)+d - ejemplo/ example: GFRN55

1) Cmax = 2 × C op

\*) GFR12 tiene orificios pasantes / has through holes in outer race

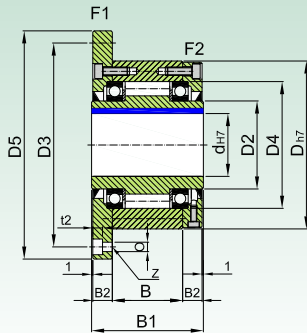
# GFR..F1F2F7

# GFRN..F5F6

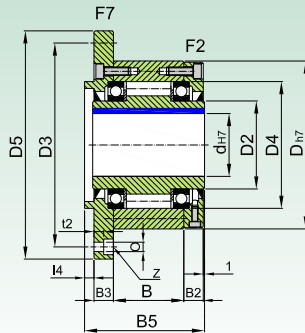
**Ruedas libres de rodillos con ranura interior y orificios de fijación, autosportadas por rodamientos, estancas, con brida a designar.**

*Roller type free wheel with inner keyway and fixing holes, self-supported by ball bearings, self-contained, with flanges to be designated.*

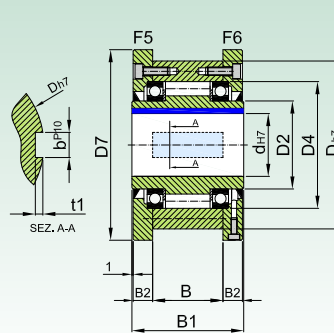
GFR..F1F2



GFR..F2F7



GFRN..F5F6



| Tipo<br>Type                             | Tamaño<br>Size | Par máximo de<br>funcionamiento<br>Maximum operating<br>torque | Velocidad limite<br>Overrunning speed<br>of race |                               | Dimensiones<br>Dimensions |     |     |     |       |      |      |     |     |      |     |      |      |     |     |       | Peso<br>Weight |
|------------------------------------------|----------------|----------------------------------------------------------------|--------------------------------------------------|-------------------------------|---------------------------|-----|-----|-----|-------|------|------|-----|-----|------|-----|------|------|-----|-----|-------|----------------|
|                                          | d H7           | C op (1)                                                       | Aro<br>interior<br>Inner ring                    | Aro<br>exterior<br>Outer ring | Dh7                       | D5  | D7  | D3  | D4 h7 | 0    | t2   | z   | B1  | B5   | B   | B2   | B3   | I4  | t1  | bP10  |                |
|                                          | [mm]           | [Nm]                                                           | [RPM]                                            | [RPM]                         | [mm]                      |     |     |     |       |      |      |     | -   | [mm] |     |      |      |     |     |       |                |
| "GFR..F1F2,<br>GFR..F2F7,<br>GFRN..F5F6" | 12             | 55                                                             | 3100                                             | 4700                          | 62                        | 85  | 70  | 72  | 42    | 5,5  | 5,7  | 3   | 42  | 44   | 20  | 10   | 10   | 3   | 2,5 | 4     | 1,2            |
|                                          | 15             | 125                                                            | 2800                                             | 4400                          | 68                        | 92  | 76  | 78  | 47    | 5,5  | 5,7  | 3   | 52  | 54   | 28  | 11   | 11   | 3   | 3   | 5     | 1,6            |
|                                          | 20             | 181                                                            | 2400                                             | 4100                          | 75                        | 98  | 84  | 85  | 55    | 5,5  | 5,7  | 4   | 57  | 59   | 34  | 10,5 | 10,5 | 3   | 3,5 | 6     | 1,9            |
|                                          | 25             | 288                                                            | 1600                                             | 3800                          | 90                        | 118 | 99  | 104 | 68    | 6,6  | 6,8  | 4   | 60  | 62   | 35  | 11,5 | 11,5 | 3   | 4   | 8     | 2,9            |
|                                          | 30             | 500                                                            | 1300                                             | 2800                          | 100                       | 128 | 109 | 114 | 75    | 6,6  | 6,8  | 6   | 68  | 70   | 43  | 11,5 | 11,5 | 3   | 4   | 8     | 3,9            |
|                                          | 35             | 725                                                            | 1200                                             | 2600                          | 110                       | 140 | 119 | 124 | 80    | 6,6  | 6,8  | 6   | 74  | 76   | 45  | 13,5 | 13   | 3,5 | 5   | 10    | 4,9            |
|                                          | 40             | 1025                                                           | 850                                              | 2300                          | 125                       | 160 | 135 | 142 | 90    | 9    | 9    | 6   | 86  | 88   | 53  | 15,5 | 15   | 3,5 | 5   | 12    | 7,5            |
|                                          | 45             | 1125                                                           | 740                                              | 2200                          | 130                       | 165 | 140 | 146 | 95    | 9    | 9    | 8   | 86  | 88   | 53  | 15,5 | 15   | 3,5 | 5,5 | 14    | 7,8            |
|                                          | 50             | 2125                                                           | 580                                              | 1950                          | 150                       | 185 | 160 | 166 | 110   | 9    | 9    | 8   | 94  | 96   | 64  | 14   | 13   | 4   | 5,5 | 14    | 10,8           |
|                                          | 55             | 2625                                                           | 550                                              | 1800                          | 160                       | 204 | 170 | 182 | 115   | 11   | 11   | 8   | 104 | 106  | 66  | 18   | 17   | 4   | 6   | 16    | 14,0           |
|                                          | 60             | 3500                                                           | 530                                              | 1700                          | 170                       | 214 | 182 | 192 | 125   | 11   | 11   | 10  | 114 | 116  | 78  | 17   | 16   | 4   | 7   | 18    | 16,8           |
|                                          | 70             | 5750                                                           | 500                                              | 1600                          | 190                       | 234 | 202 | 212 | 140   | 11   | 11   | 10  | 134 | 136  | 95  | 18,5 | 17,5 | 4   | 7,5 | 20    | 20,8           |
|                                          | 80             | 8500                                                           | 480                                              | 1500                          | 210                       | 254 | 222 | 232 | 160   | 11   | 11   | 10  | 144 | 146  | 100 | 21   | 20   | 4   | 9   | 22    | 27,0           |
|                                          | 90             | 14500                                                          | 450                                              | 1300                          | 230                       | 278 | 242 | 254 | 180   | 14   | 13   | 10  | 158 | 160  | 115 | 20,5 | 19   | 4,5 | 9   | 25    | 40,0           |
|                                          | 100            | 20000                                                          | 350                                              | 1100                          | 270                       | 335 | 282 | 305 | 210   | 18   | 17,5 | 10  | 182 | 184  | 120 | 30   | 28   | 5   | 10  | 28    | 67,0           |
| 130                                      | 31250          | 250                                                            | 900                                              | 310                           | 380                       | 322 | 345 | 240 | 18    | 17,5 | 12   | 212 | 214 | 152  | 29  | 27   | 5    | 11  | 32  | 94,0  |                |
| 150                                      | 70000          | 200                                                            | 700                                              | 400                           | 485                       | 412 | 445 | 310 | 22    | 21,5 | 12   | 246 | 248 | 180  | 32  | 30   | 5    | 12  | 36  | 187,0 |                |

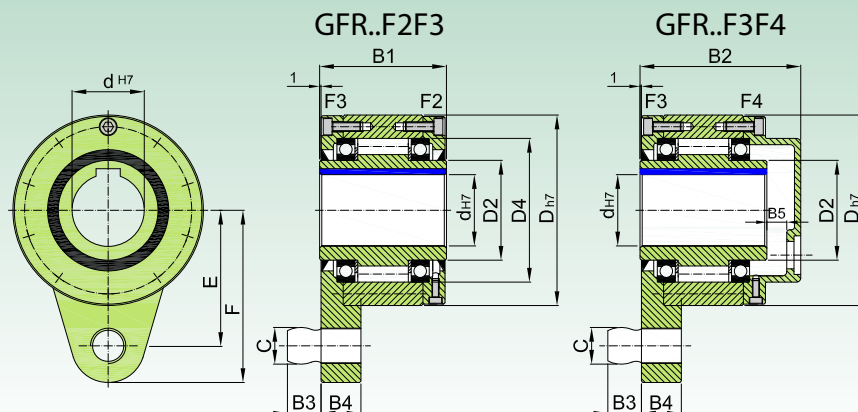
## NOTAS / Notes

Designación/Designation GFR(N)+d+(no.Brida+no.Brida) - ejemplo/ example: GFR50F2F7

## GFR..F2F3F4

**Ruedas libres de rodillos para montaje exterior, con ranura interior, autosportadas por rodamientos, estancas, con brida a designar.**

*Roller type free wheel for external mounting, with inner keyway, self-supported by ball bearings, self-contained, with flanges to be designated.*



| Tipo<br>Type               | Tamaño<br>Size | Par máximo de<br>funcionamiento<br>Maximum operating torque | Velocidad límite<br>Overrunning speed | Dimensiones<br>Dimensions |      |      |      |      |      |      |      |      |      | Peso<br>Weight |
|----------------------------|----------------|-------------------------------------------------------------|---------------------------------------|---------------------------|------|------|------|------|------|------|------|------|------|----------------|
|                            | d H7           | C op (1)                                                    |                                       | D                         | D2   | C    | B1   | B2   | B3   | B4   | F    | E    | B5   |                |
|                            | [mm]           | [Nm]                                                        | [RPM]                                 | [mm]                      | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [kg]           |
| "GFR..F2-F3<br>GFR..F3-F4" | 12             | 55                                                          | 3100                                  | 62                        | 20   | 10   | 42   | 64   | 10   | 13   | 59   | 44   | 6    | 1,4            |
|                            | 15             | 125                                                         | 2800                                  | 68                        | 25   | 10   | 52   | 78   | 10   | 13   | 62   | 47   | 10   | 1,8            |
|                            | 20             | 181                                                         | 2400                                  | 75                        | 30   | 12   | 57   | 82   | 11   | 15   | 72   | 54   | 10   | 2,3            |
|                            | 25             | 288                                                         | 1600                                  | 90                        | 40   | 16   | 60   | 85   | 14   | 18   | 84   | 62   | 10   | 3,4            |
|                            | 30             | 500                                                         | 1300                                  | 100                       | 45   | 16   | 68   | 95   | 14   | 18   | 92   | 68   | 10   | 4,5            |
|                            | 35             | 725                                                         | 1200                                  | 110                       | 50   | 20   | 74   | 102  | 18   | 25   | 102  | 76   | 12   | 5,6            |
|                            | 40             | 1025                                                        | 850                                   | 125                       | 55   | 20   | 86   | 115  | 18   | 25   | 112  | 85   | 12   | 8,5            |
|                            | 45             | 1125                                                        | 740                                   | 130                       | 60   | 25   | 86   | 115  | 22   | 25   | 120  | 90   | 12   | 8,9            |
|                            | 50             | 2125                                                        | 580                                   | 150                       | 70   | 25   | 94   | 123  | 22   | 25   | 135  | 102  | 12   | 12,8           |
|                            | 55             | 2625                                                        | 550                                   | 160                       | 75   | 32   | 104  | 138  | 25   | 30   | 142  | 108  | 15   | 16,2           |
|                            | 60             | 3500                                                        | 530                                   | 170                       | 80   | 32   | 114  | 147  | 25   | 30   | 145  | 112  | 15   | 19,3           |
|                            | 70             | 5750                                                        | 500                                   | 190                       | 90   | 38   | 134  | 168  | 30   | 35   | 175  | 135  | 16   | 23,5           |
|                            | 80             | 8500                                                        | 480                                   | 210                       | 105  | 38   | 144  | 178  | 30   | 35   | 185  | 145  | 16   | 32             |
|                            | 90             | 14500                                                       | 450                                   | 230                       | 120  | 50   | 158  | 192  | 40   | 45   | 205  | 155  | 16   | 47,2           |
|                            | 100            | 20000                                                       | 350                                   | 270                       | 140  | 50   | 182  | 217  | 40   | 45   | 230  | 180  | 16   | 76             |
|                            | 130            | 31250                                                       | 250                                   | 310                       | 160  | 68   | 212  | 250  | 55   | 60   | 268  | 205  | 18   | 110            |
|                            | 150            | 70000                                                       | 200                                   | 400                       | 200  | 68   | 246  | 286  | 55   | 60   | 325  | 255  | 20   | 214            |

## NOTAS / Notes

Designación/Designation GFR(N)+d+(no.Brida+no.Brida) - ejemplo/ example: GFR70F3F4