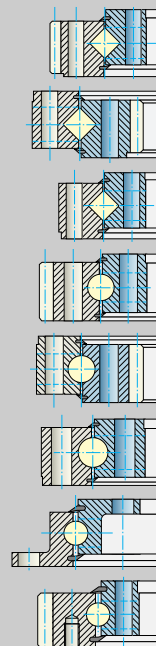


# RANGE OF PRODUCTS



- CODING SYSTEM
- BEARING FAMILIES
- DRAWINGS
- CAPACITY CURVES
- BEARING REFERENCES

4



- **CROSSED ROLLERS External Gear 06**
- **CROSSED ROLLERS Internal Gear 07**
- **CROSSED ROLLERS Without Gear 08**
- **BALLS External Gear 01**
- **BALLS Internal Gear 02**
- **BALLS Without Gear 03**
- **LIGHT SERIES 21 to 29**
- **LIGHT SERIES SOLID SECTIONS 31 to 39**

# CODING SYSTEM

ROLLIX bearings are designated by a part reference including numbers and letters, according to the opposite codes.

| GEOMETRY |      |    |  | METALLURGY |   |   |
|----------|------|----|--|------------|---|---|
| 06       | 1116 | 00 |  | Z          | Z | A |

06 1116 00 Z Z 1 2 A

Family

06 1116 00 Z Z 1 2 A

Mean raceway ball/roller pitch Ø

06 1116 00 Z Z 1 2 A

Variation N° in the family

06 1116 00 Z Z 1 2 A

Material code letter ungeared ring

06 1116 00 Z Z 1 2 A

Material code letter geared ring

Material code : Z Improved XC45 (or similar)

X XC45 core hardened

N 42CrMo4 normalized

D 42CrMo4 core hardened

K aluminium alloys

J other materials

06 1116 00 Z Z 1 2 A

Gear treatment :

0 gear without heat treatment

1 gear with contour hardening on flanks and roots

2 gear flanks superficially hardened

3 other hardening treatments

06 1116 00 Z Z 1 2 A

Surface coating :

0 oil storage protection

1 zinc or cadmium plated + chromate coating

2 phosphate coating

3 chemical nickel plating

4 paint : 40 ROLLIX standard primer

41 to 49 specific paint systems

5 to 9 miscellaneous treatments (6 = anodic oxidation)

06 1116 00 Z Z 1 2 A

Revision index : Project drawings : revisions according to numerical index from 1 to 9

Manufacturing drawings : first production = index A

subsequent revisions = index B to Z

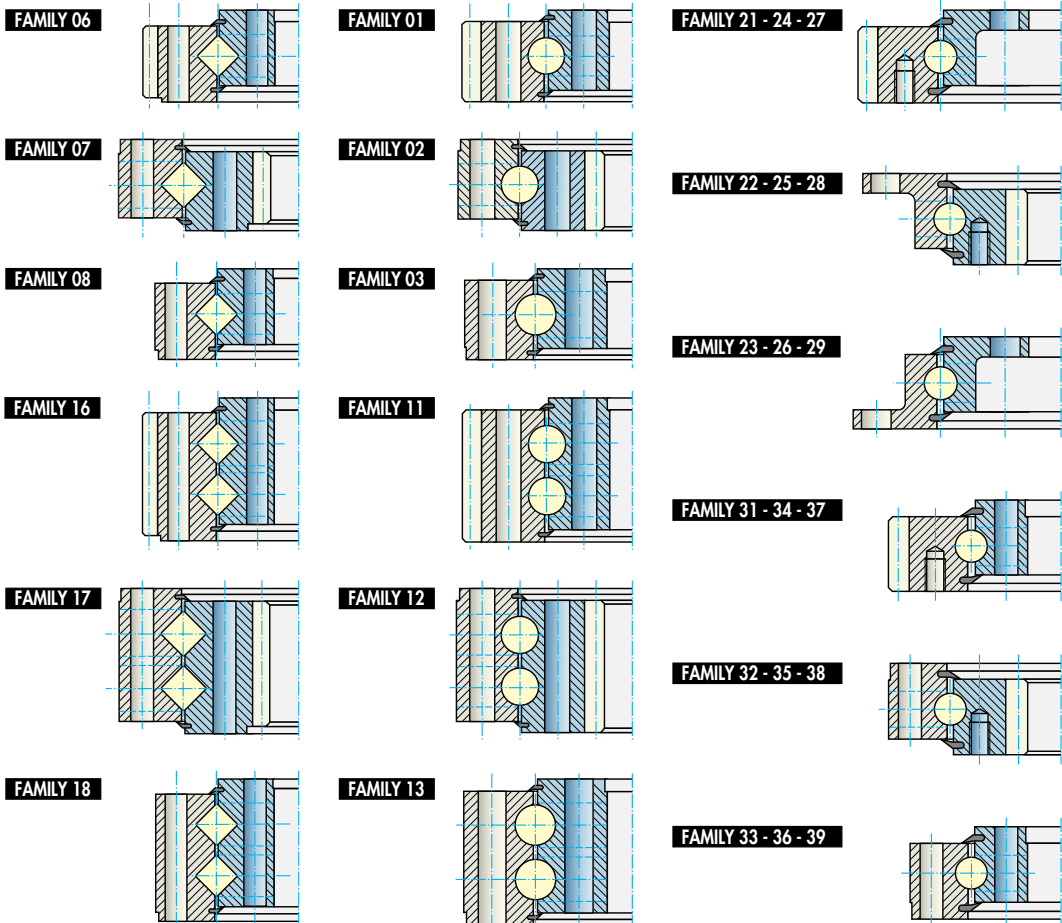
# BEARING FAMILIES

| CROSSED ROLLERS STANDARD |            | BALLS STANDARD |            | LIGHT SERIES     |                   |           | SOLID SECTIONS   |                   |           | GEAR              |   |
|--------------------------|------------|----------------|------------|------------------|-------------------|-----------|------------------|-------------------|-----------|-------------------|---|
| Class V                  |            | Class III & V  |            | Class I III V    |                   |           | Class I III V    |                   |           | Ext. Int. Without |   |
| Single row               | Double row | Single row     | Double row | Normal clearance | Reduced clearance | Precision | Normal clearance | Reduced clearance | Precision |                   |   |
| 06                       | 16         | 01             | 11         | 21               | 24                | 27        | 31               | 34                | 37        | ●                 |   |
| 07                       | 17         | 02             | 12         | 22               | 25                | 28        | 32               | 35                | 38        |                   | ● |
| 08                       | 18         | 03             | 13         | 23               | 26                | 29        | 33               | 36                | 39        |                   | ● |

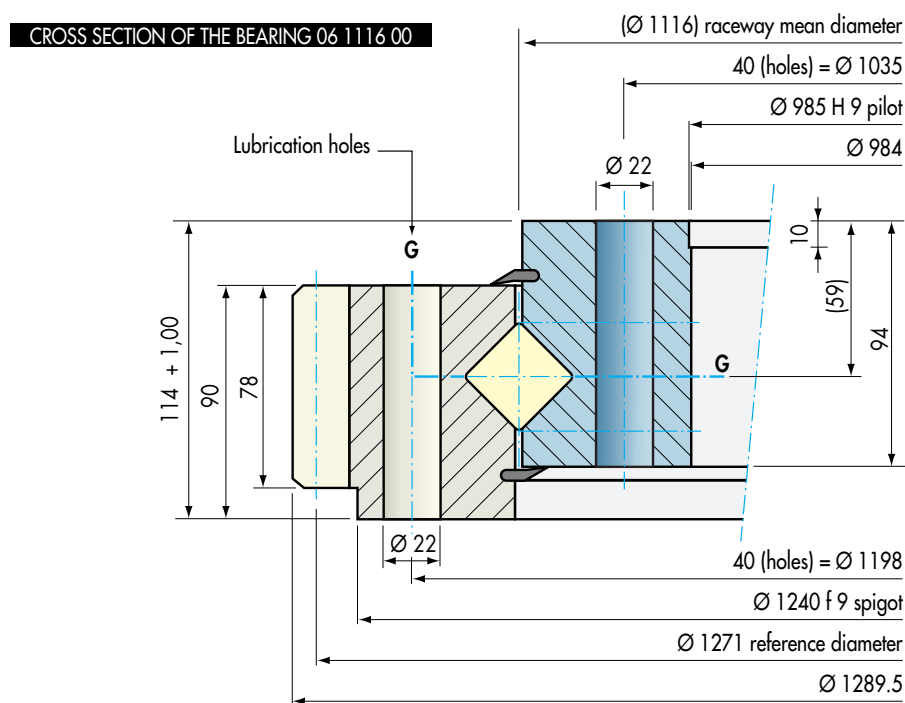
## DEFINITION OF CLASSES

Classes I, III and V define the amount of internal preload of the bearing. Class V corresponds to the maximal preload.

This table shows the main families of ROLLIX slewing rings. Slewing rings of specific types are listed in the document IT ETR 002.



# DRAWINGS



Each bearing is designated by a drawing reference, example : 06 1116 00.

The drawing defines both principal and functional dimensions : spigots, bolt patterns and dimensions, overall height, reference diameter of the gear.

## Fastening :

the drawing indicates :

- **40** : number of fastening holes,
- **"=**" symbolizes **equispaced holes**,
- **"#**" indicates **non equispaced holes**,
- **1035** : bolt circle diameter.

The symbol **"G"** indicates the arrangement of the lubrication holes, the standard tapping is : M 10 x 1,00 except for the light series and the solid section light series : M 8 x 1,00.

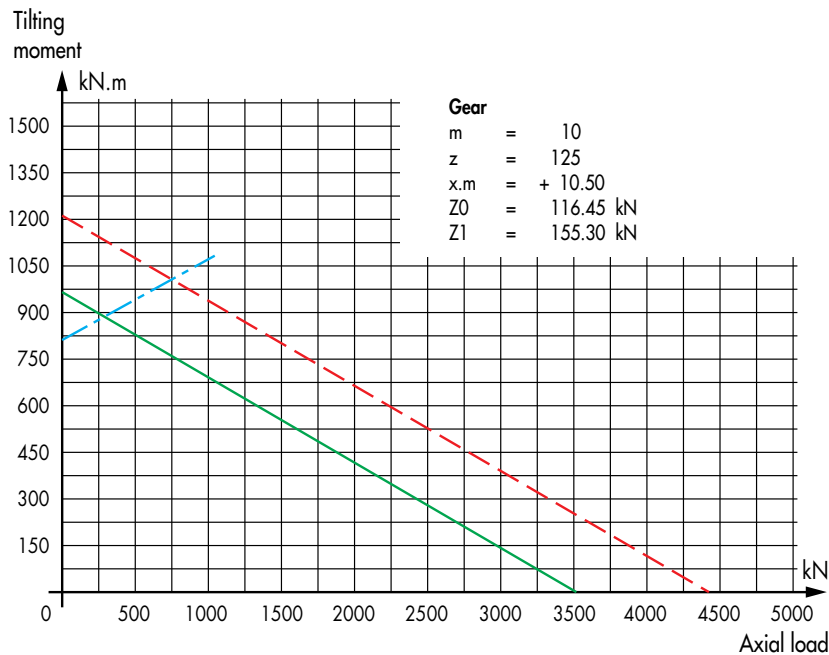
The raceway mean diameter of the bearing is given for information only.

The gap diameters cannot be used as spigots, except when their dimensions are toleranced on the drawing.

# CAPACITY CURVES

A rating graph illustrating the various load capacities is associated with each bearing reference. This "capacity curve" shows the same reference number as the bearing. The steel specification which is used is indicated by the code letter.

CURVES OF BEARING 06 1116 00



— — — — — This dotted line symbolizes the maximum dynamic capacity of the bearing. The functional point revised with the application and utilization factors must never exceed this limit under maximum loading.

————— This solid line represents a utilization limit curve for a minimum application factor of 1,25.

- - - - - This dot-dash line indicates the bolting limit capacity for a supported load using bolts grade 10.9.

- The functional point revised by utilization factors must never exceed this limit in **normal operation**.

- The **title block** indicates the main characteristics of the gear : m, z, xm, and the ultimate resistance to fatigue bending stress according to the gear ring material and heat treatment indicated by a material code letter.

**m** = module : 10

**z** = number of teeth : 125

**x.m** = addendum modification (radius) : + 10.50

**Z0** = Z : material

0 : gear without treatment

**Z1** = Z : material

1 : gear without contour hardening.

# BEARING REFERENCES

## BEARINGS WITH EXTERNAL GEAR - Classification according to external diameter

| External diameter | Internal diameter | Height | Weight | Module | Number of teeth | Bearing reference | Page | Quality | STD = STANDARD<br>SF = THIN SERIES |
|-------------------|-------------------|--------|--------|--------|-----------------|-------------------|------|---------|------------------------------------|
| 244               | 125               | 25     | 5      | 2      | 120             | 01 0181 02        | 75   |         | STD                                |
| 318               | 169               | 45     | 14     | 3      | 104             | 01 0235 00        | 75   |         | STD                                |
| 379               | 210               | 45     | 20     | 4      | 92              | 01 0289 06        | 75   |         | STD                                |
| 403,5             | 234               | 55     | 25     | 4,5    | 88              | 06 0307 00        | 59   |         | STD                                |
| 440               | 265               | 50     | 28     | 4,5    | 95              | 01 0342 00        | 76   |         | STD                                |
| 529               | 323               | 54     | 45     | 5      | 103             | 01 0422 01        | 76   |         | STD                                |
| 535               | 305               | 75     | 61     | 8      | 65              | 06 0400 00        | 59   |         | STD                                |
| 589               | 383               | 75     | 62     | 5      | 116             | 06 0475 22        | 59   |         | STD                                |
| 654               | 390               | 85     | 98     | 8      | 80              | 06 0508 00        | 60   |         | STD                                |
| 689               | 455               | 74     | 89     | 6      | 112             | 01 0555 01        | 76   |         | STD                                |
| 700               | 479               | 77     | 85     | 6      | 114             | 06 0574 09        | 60   |         | STD                                |
| 774               | 516               | 82     | 118    | 8      | 94              | 01 0626 00        | 77   |         | STD                                |
| 816               | 573               | 90     | 129    | 6      | 132             | 06 0675 00        | 60   |         | STD                                |
| 863               | 679               | 82     | 102    | 6      | 142             | 01 0765 01        | 77   |         | STD                                |
| 886               | 610               | 85     | 155    | 8      | 108             | 06 0734 00        | 61   |         | STD                                |
| 979               | 717               | 100    | 178    | 10     | 94              | 06 0823 18        | 61   |         | STD                                |
| 1022              | 770               | 82     | 159    | 8      | 125             | 01 0880 00        | 77   |         | STD                                |
| 1094              | 833               | 82     | 179    | 8      | 134             | 01 0947 00        | 78   |         | STD                                |
| 1144              | 869               | 100    | 228    | 10     | 111             | 06 0980 09        | 61   |         | STD                                |
| 1218              | 930               | 98     | 268    | 10     | 119             | 01 1050 00        | 78   |         | STD                                |
| 1289,5            | 984               | 114    | 330    | 10     | 125             | 06 1116 00        | 62   |         | STD                                |
| 1358              | 1045              | 98     | 325    | 10     | 133             | 01 1180 00        | 78   |         | STD                                |
| 1431              | 1200              | 63     | 176    | 8      | 177             | 01 1295 01        | 79   |         | SF                                 |
| 1476              | 1084              | 110    | 503    | 10     | 144             | 06 1250 21        | 62   |         | STD                                |
| 1604              | 1206              | 130    | 653    | 10     | 157             | 06 1390 03        | 62   |         | STD                                |
| 1605              | 1270              | 110    | 469    | 12     | 131             | 01 1410 00        | 79   |         | STD                                |
| 1727              | 1500              | 63     | 213    | 8      | 214             | 01 1595 00        | 79   |         | SF                                 |
| 1836              | 1433              | 135    | 791    | 16     | 112             | 06 1595 04        | 63   |         | STD                                |
| 1929              | 1565              | 110    | 617    | 14     | 135             | 01 1712 00        | 80   |         | STD                                |
| 1975              | 1750              | 63     | 244    | 8      | 245             | 01 1845 02        | 80   |         | SF                                 |
| 2027              | 1615              | 150    | 1004   | 14     | 142             | 06 1790 09        | 63   |         | STD                                |
| 2140              | 1720              | 130    | 953    | 16     | 131             | 01 1895 00        | 80   |         | STD                                |
| 2165              | 1950              | 68     | 278    | 8      | 269             | 01 2040 03        | 81   |         | SF                                 |
| 2267              | 1815              | 140    | 1174   | 16     | 139             | 06 2002 00        | 63   |         | STD                                |
| 2342              | 2091              | 70     | 373    | 8      | 290             | 01 2202 00        | 81   |         | SF                                 |
| 2390              | 1950              | 130    | 1111   | 18     | 130             | 01 2130 00        | 81   |         | STD                                |
| 2534              | 2042              | 144    | 1482   | 18     | 138             | 06 2242 00        | 64   |         | STD                                |
| 2695              | 2425              | 63     | 411    | 8      | 335             | 01 2560 01        | 82   |         | SF                                 |
| 2790              | 2290              | 164    | 1895   | 18     | 151             | 06 2500 01        | 64   |         | STD                                |
| 3116              | 2600              | 164    | 2200   | 20     | 152             | 06 2810 09        | 64   |         | STD                                |
| 3200              | 2914              | 90     | 716    | 10     | 318             | 01 3031 00        | 82   |         | SF                                 |

# BEARING REFERENCES

## BEARINGS WITH INTERNAL GEAR - Classification according to external diameter

| External diameter | Internal diameter | Height | Weight | Module | Number of teeth | Bearing reference | Page | Quality | STD = STANDARD<br>SF = THIN SERIES |
|-------------------|-------------------|--------|--------|--------|-----------------|-------------------|------|---------|------------------------------------|
| 300               | 174,5             | 40     | 10     | 3      | 60              | 02 0245 00        | 83   |         | STD                                |
| 385               | 217               | 55     | 24     | 4      | 56              | 02 0308 01        | 83   |         | STD                                |
| 451               | 291               | 55     | 28     | 5      | 60              | 07 0380 01        | 65   |         | STD                                |
| 515               | 316               | 54     | 44     | 5      | 64              | 02 0422 00        | 83   |         | STD                                |
| 562               | 385               | 60     | 44     | 6      | 66              | 07 0489 11        | 65   |         | STD                                |
| 610               | 403               | 68     | 63     | 6      | 68              | 02 0520 00        | 84   |         | STD                                |
| 665               | 457               | 60     | 61     | 6      | 77              | 07 0573 00        | 65   |         | STD                                |
| 740               | 493               | 76     | 105    | 6      | 83              | 02 0626 01        | 84   |         | STD                                |
| 771               | 541               | 70     | 96     | 6      | 91              | 07 0673 00        | 66   |         | STD                                |
| 835               | 578               | 82     | 130    | 8      | 73              | 02 0720 02        | 84   |         | STD                                |
| 871               | 634               | 70     | 113    | 8      | 80              | 07 0770 00        | 66   |         | STD                                |
| 935               | 674               | 82     | 150    | 8      | 85              | 02 0820 00        | 85   |         | STD                                |
| 960               | 706               | 75     | 144    | 8      | 89              | 07 0849 00        | 66   |         | STD                                |
| 975               | 784               | 82     | 120    | 8      | 100             | 07 0885 01        | 67   |         | STD                                |
| 1050              | 794               | 82     | 168    | 8      | 100             | 02 0935 00        | 85   |         | STD                                |
| 1066              | 785               | 85     | 190    | 10     | 79              | 07 0946 05        | 67   |         | STD                                |
| 1170              | 882               | 98     | 258    | 10     | 89              | 02 1050 00        | 85   |         | STD                                |
| 1175              | 961               | 90     | 179    | 10     | 98              | 07 1075 01        | 67   |         | STD                                |
| 1251              | 979               | 91     | 238    | 10     | 99              | 07 1140 13        | 68   |         | STD                                |
| 1360              | 1052              | 98     | 321    | 10     | 106             | 02 1225 00        | 86   |         | STD                                |
| 1390              | 1162              | 63     | 171    | 8      | 146             | 02 1295 00        | 86   |         | SF                                 |
| 1431              | 1143              | 97     | 323    | 10     | 115             | 07 1304 04        | 68   |         | STD                                |
| 1530              | 1178              | 130    | 541    | 12     | 100             | 07 1385 03        | 68   |         | STD                                |
| 1560              | 1215              | 110    | 471    | 12     | 102             | 02 1415 00        | 86   |         | STD                                |
| 1676              | 1422              | 78     | 278    | 10     | 144             | 02 1565 02        | 87   |         | SF                                 |
| 1770              | 1375              | 150    | 802    | 14     | 100             | 07 1606 02        | 69   |         | STD                                |
| 1870              | 1501              | 110    | 607    | 14     | 108             | 02 1715 00        | 87   |         | STD                                |
| 1916              | 1662              | 78     | 324    | 10     | 168             | 02 1805 02        | 87   |         | SF                                 |
| 2002              | 1595              | 150    | 951    | 14     | 115             | 07 1830 04        | 69   |         | STD                                |
| 2130              | 1906              | 68     | 290    | 8      | 239             | 02 2040 00        | 88   |         | SF                                 |
| 2190              | 1731              | 144    | 1199   | 16     | 109             | 07 1997 04        | 69   |         | STD                                |
| 2195              | 1780              | 130    | 979    | 16     | 112             | 02 2022 00        | 88   |         | STD                                |
| 2298              | 2066              | 70     | 343    | 8      | 259             | 02 2202 00        | 88   |         | SF                                 |
| 2590              | 2110              | 160    | 1626   | 18     | 118             | 07 2400 00        | 70   |         | STD                                |
| 2695              | 2426              | 63     | 414    | 8      | 304             | 02 2560 00        | 89   |         | SF                                 |
| 2785              | 2362              | 130    | 1270   | 18     | 132             | 02 2618 00        | 89   |         | STD                                |
| 3020              | 2495              | 158    | 2154   | 20     | 126             | 07 2810 09        | 70   |         | STD                                |
| 3190              | 2914              | 90     | 735    | 8      | 366             | 02 3074 01        | 89   |         | SF                                 |

# BEARING REFERENCES

## BEARINGS WITHOUT GEAR - Classification according to external diameter

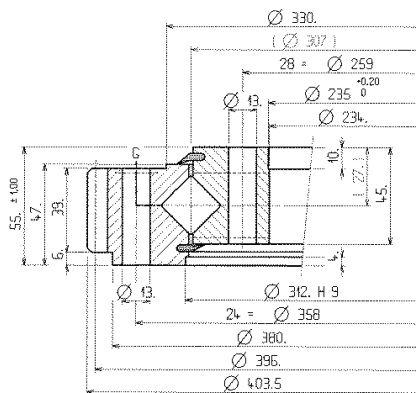
| External diameter | Internal diameter | Height | Weight | Bearing reference | Page | Quality | STD = STANDARD |
|-------------------|-------------------|--------|--------|-------------------|------|---------|----------------|
| 234               | 125               | 25     | 5      | 03 0181 07        | 90   |         | STD            |
| 290               | 150               | 41,5   | 14     | 03 0217 00        | 90   |         | STD            |
| 300               | 140               | 52     | 16     | 08 0220 05        | 71   |         | STD            |
| 329               | 190               | 45     | 17     | 03 0260 00        | 90   |         | STD            |
| 350               | 190               | 52     | 20     | 08 0270 04        | 71   |         | STD            |
| 403,5             | 234               | 55     | 26     | 08 0307 00        | 71   |         | STD            |
| 440               | 240               | 60     | 37     | 08 0340 04        | 72   |         | STD            |
| 440               | 265               | 50     | 29     | 03 0342 05        | 91   |         | STD            |
| 455               | 265               | 71     | 45     | 03 0360 00        | 91   |         | STD            |
| 474               | 336               | 46     | 24     | 08 0405 05        | 72   |         | STD            |
| 475               | 335               | 45     | 30     | 03 0402 00        | 91   |         | STD            |
| 500               | 305               | 75     | 51     | 08 0400 00        | 72   |         | STD            |
| 589               | 383               | 75     | 66     | 08 0475 08        | 73   |         | STD            |
| 626               | 424               | 72     | 70     | 03 0525 01        | 92   |         | STD            |
| 700               | 479               | 77     | 90     | 08 0574 08        | 73   |         | STD            |
| 712               | 487               | 72     | 91     | 03 0600 02        | 92   |         | STD            |
| 816               | 573               | 90     | 137    | 08 0675 00        | 73   |         | STD            |
| 900               | 670               | 86     | 148    | 03 0785 00        | 92   |         | STD            |
| 979               | 717               | 100    | 193    | 08 0823 08        | 74   |         | STD            |
| 1130              | 845               | 100    | 271    | 03 0980 02        | 93   |         | STD            |
| 1144              | 869               | 100    | 248    | 08 0980 06        | 74   |         | STD            |

The following pages show you a selection of our range of standard bearings.

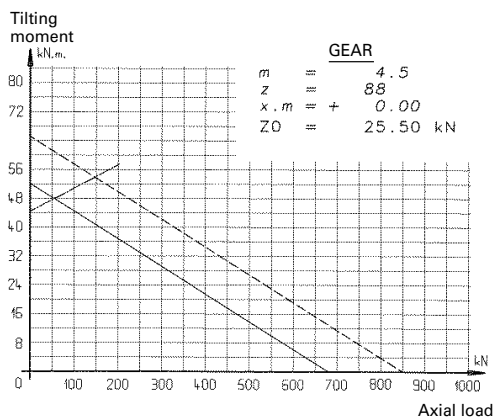
These bearings are manufactured on a regular schedule.

Consult our Sales Department about their availability.

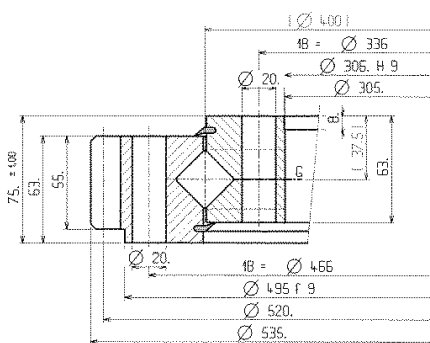
06.0307.00



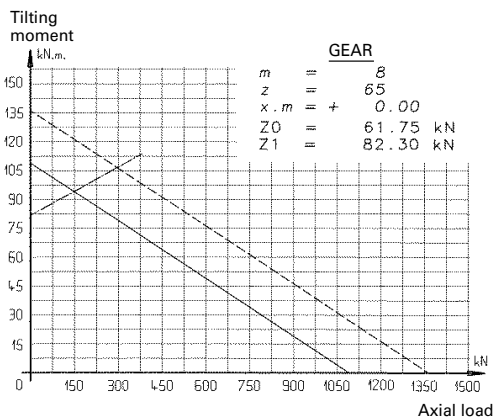
Estimated weight : 25. kg



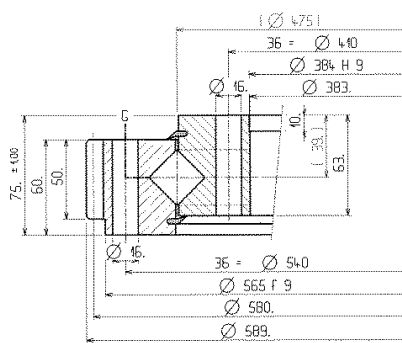
06.0400.00



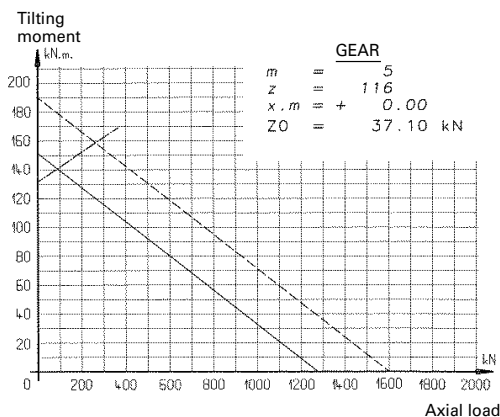
Estimated weight : 61. kg



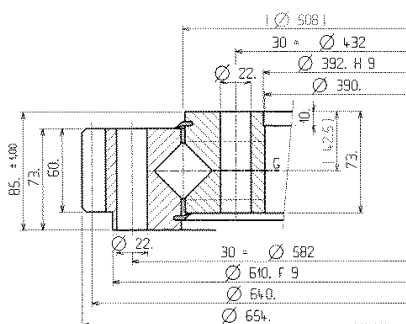
06.0475.22



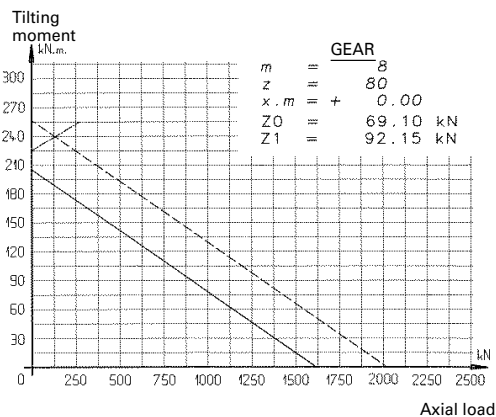
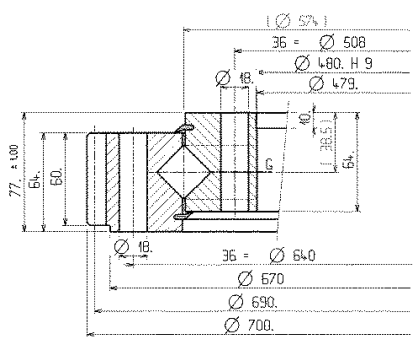
Estimated weight : 62. kg



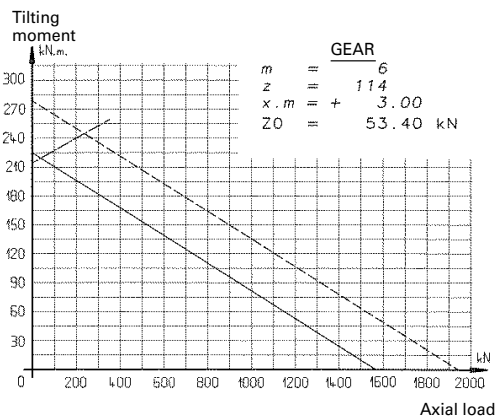
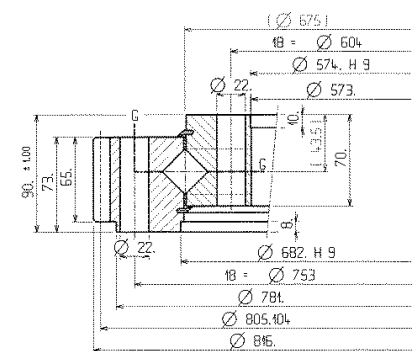
REFER TO PAGES 54 AND 55 FOR THE INTERPRETATION OF DRAWINGS AND CURVES

**06.0508.00**


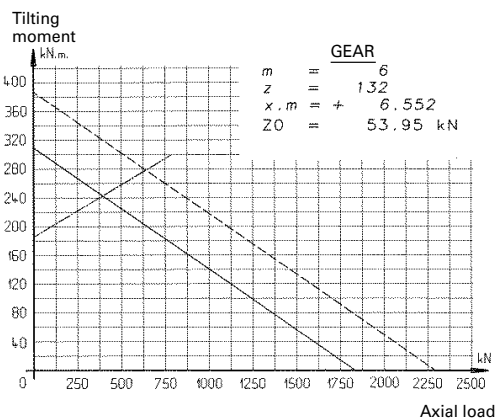
Estimated weight : 98. kg


**06.0574.09**


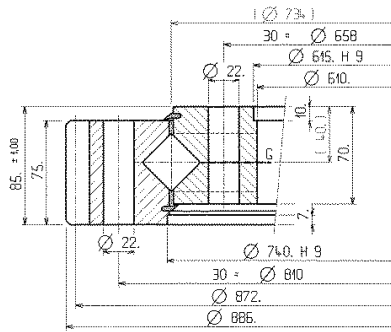
Estimated weight : 85. kg


**06.0675.00**


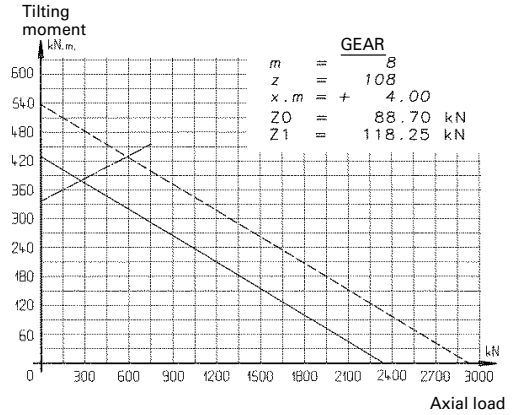
Estimated weight : 129. kg



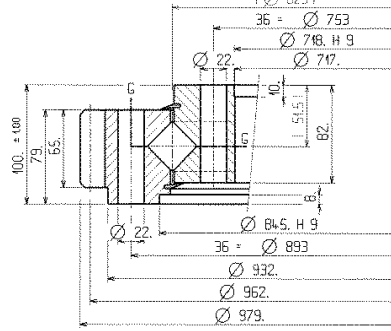
06.0734.00



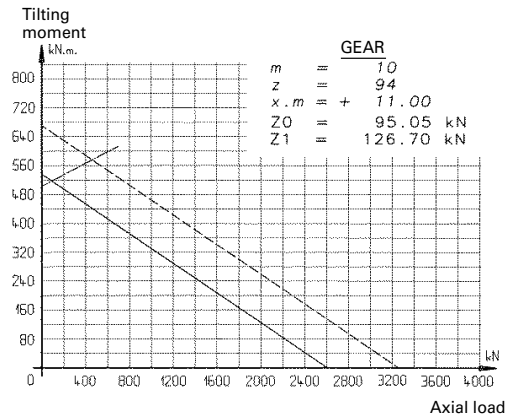
Estimated weight : 154. kg



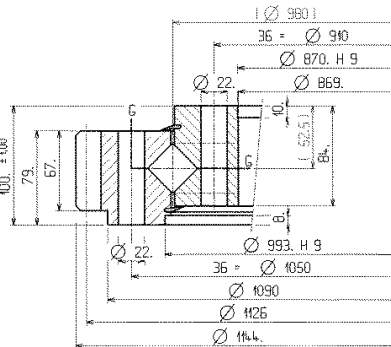
06.0823.18



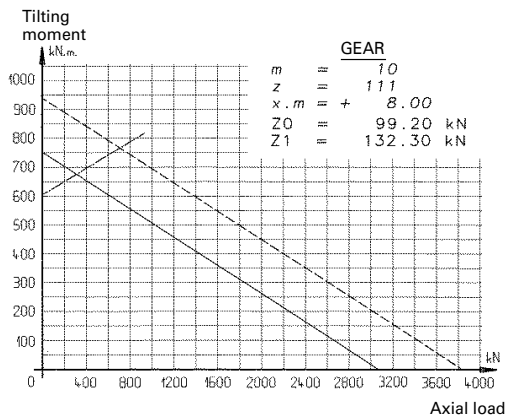
Estimated weight : 178. kg



06.0980.09

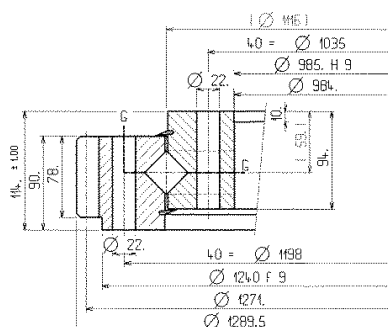


Estimated weight : 228. kg

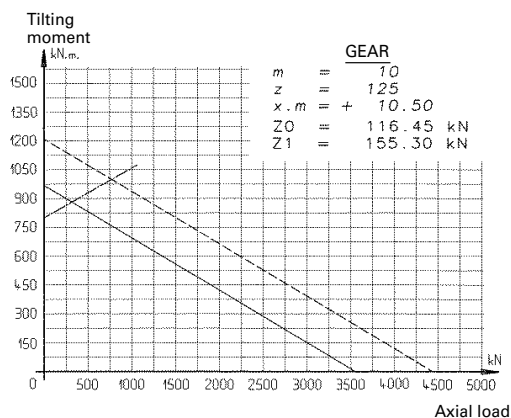


REFER TO PAGES 54 AND 55 FOR THE INTERPRETATION OF DRAWINGS AND CURVES

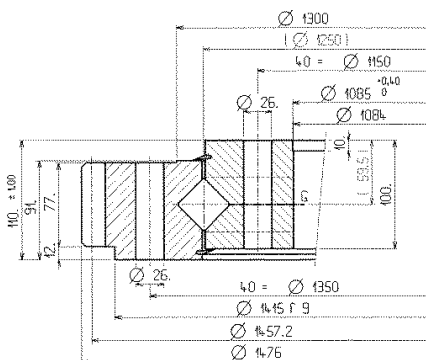
06.1116.00



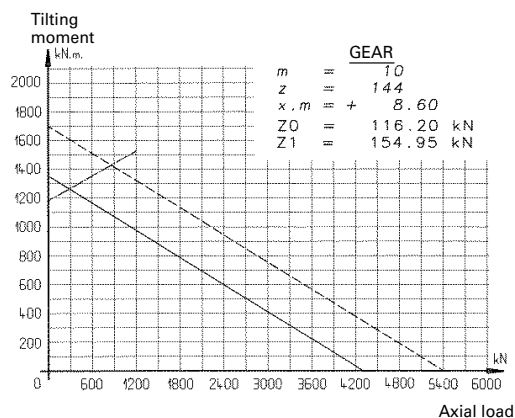
Estimated weight : 330. kg



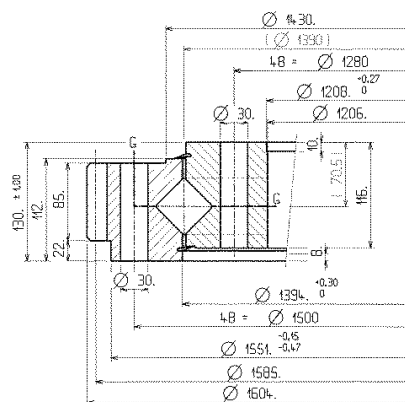
06.1250.21



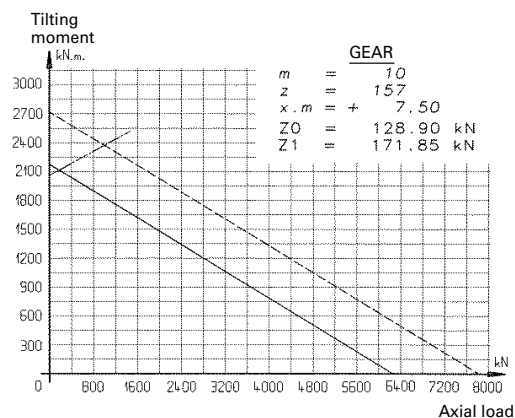
Estimated weight : 503. kg



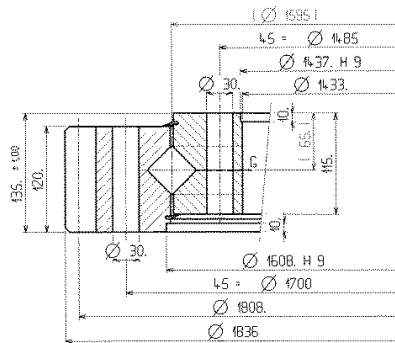
06.1390.03



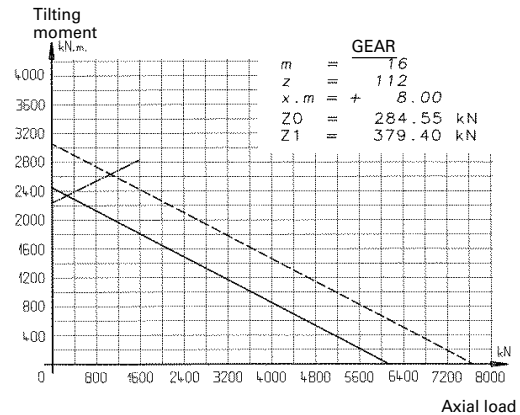
Estimated weight : 653. kg



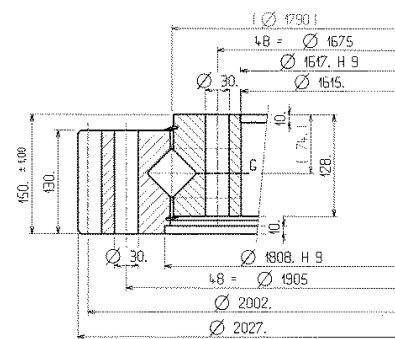
06.1595.04



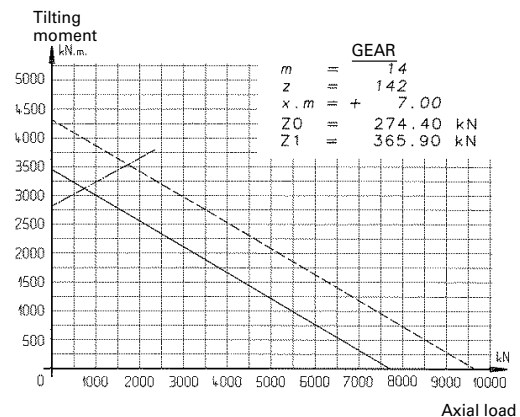
Estimated weight : 791. kg



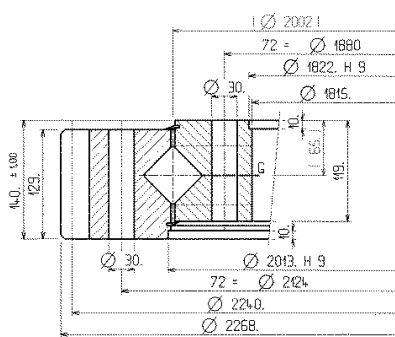
06.1790.09



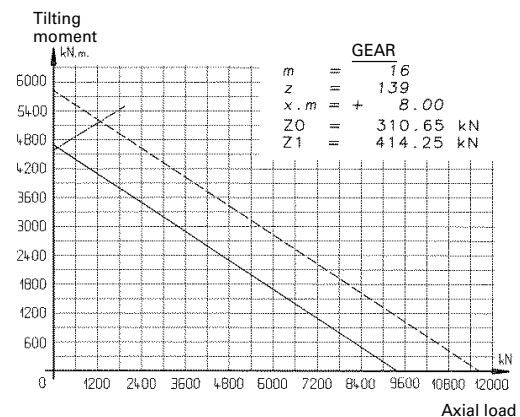
Estimated weight : 1004. kg



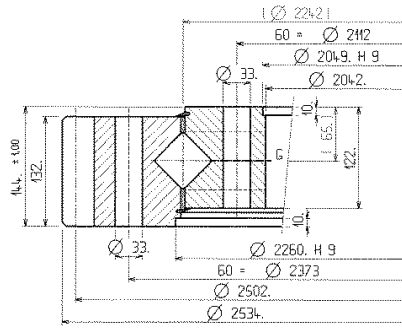
06.2002.00



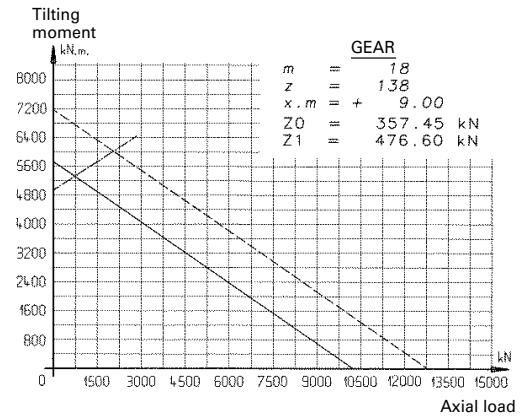
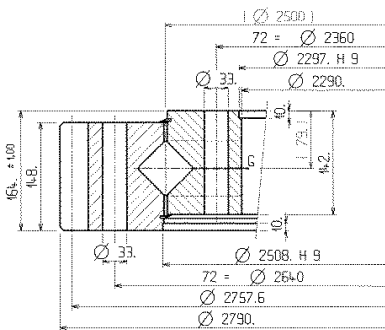
Estimated weight : 1174. kg



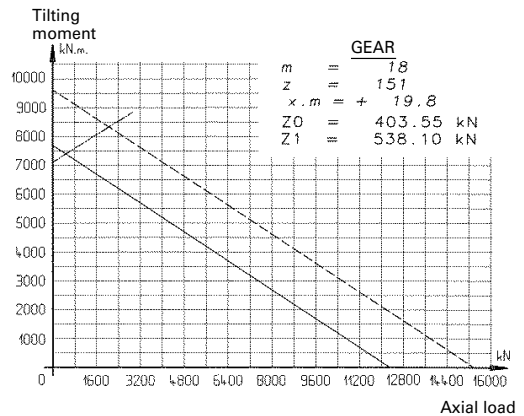
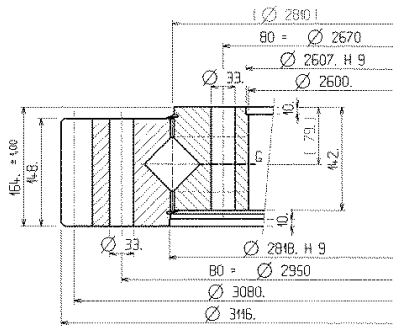
REFER TO PAGES 54 AND 55 FOR THE INTERPRETATION OF DRAWINGS AND CURVES

**06.2242.00**


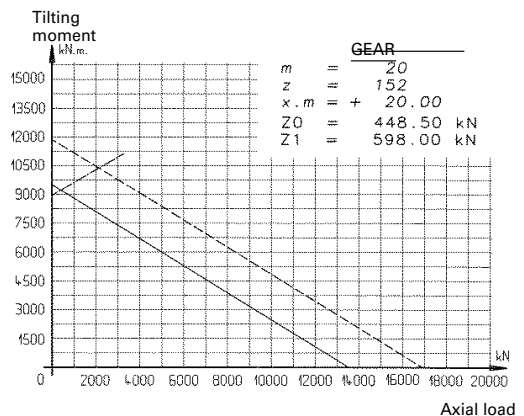
Estimated weight : 1482. kg


**06.2500.01**


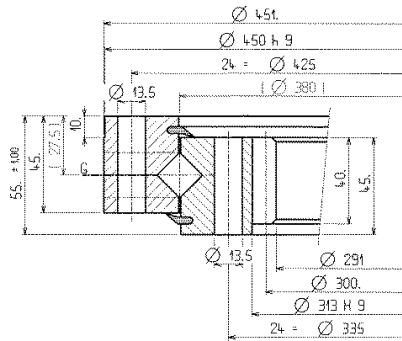
Estimated weight : 1895. kg


**06.2810.09**


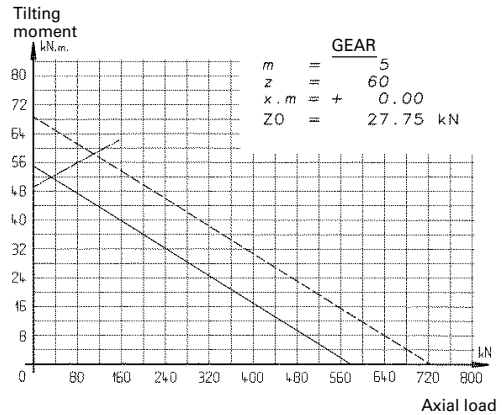
Estimated weight : 2197. kg



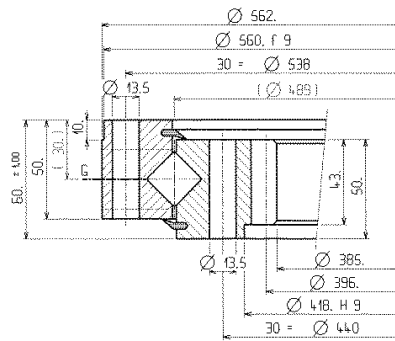
07.0380.01



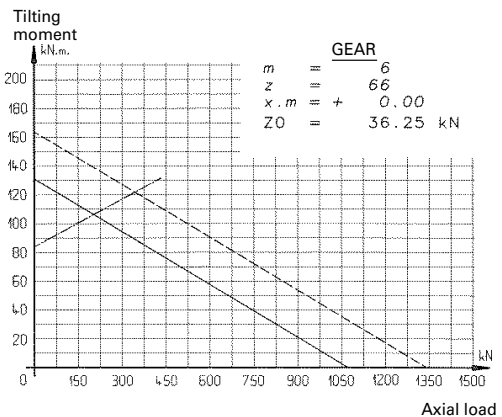
Estimated weight : 28. kg



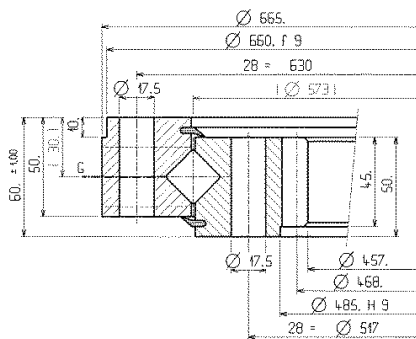
07.0489.11



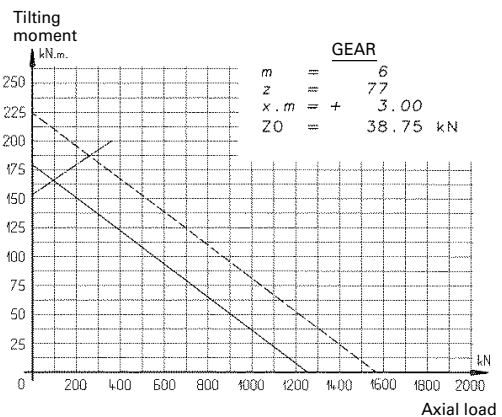
Estimated weight : 44. kg



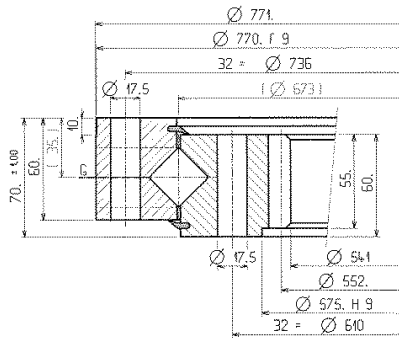
07.0573.00



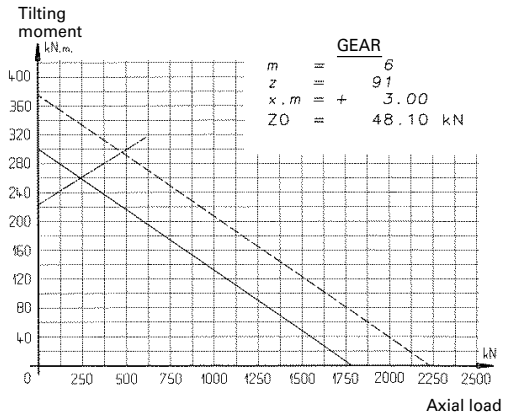
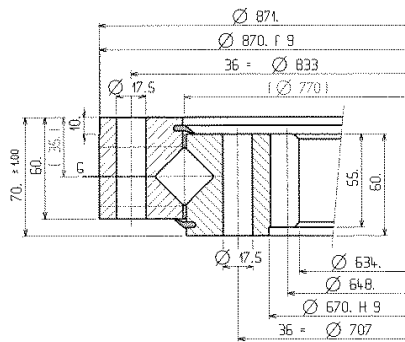
Estimated weight : 61. kg



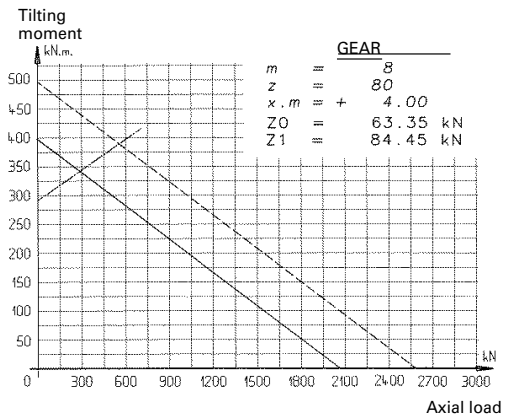
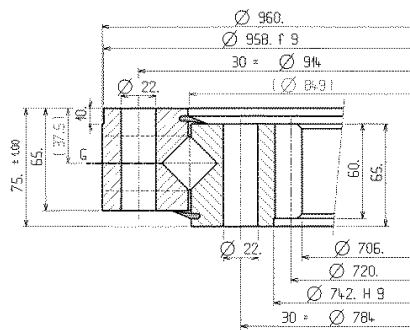
REFER TO PAGES 54 AND 55 FOR THE INTERPRETATION OF DRAWINGS AND CURVES

**07.0673.00**


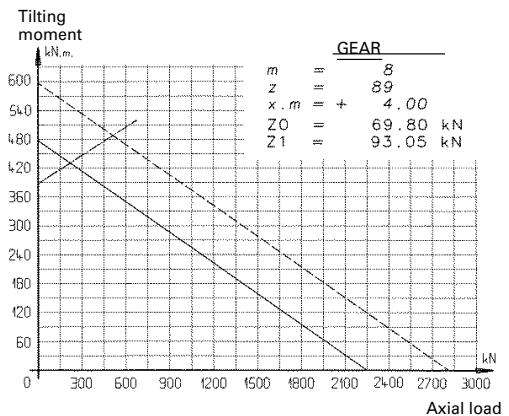
Estimated weight : 96. kg


**07.0770.00**


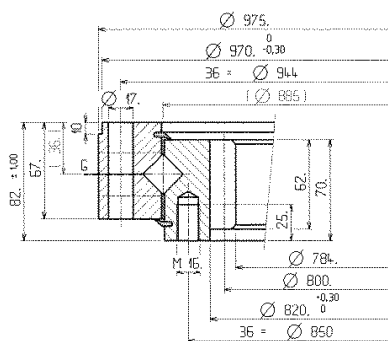
Estimated weight : 113. kg


**07.0849.00**


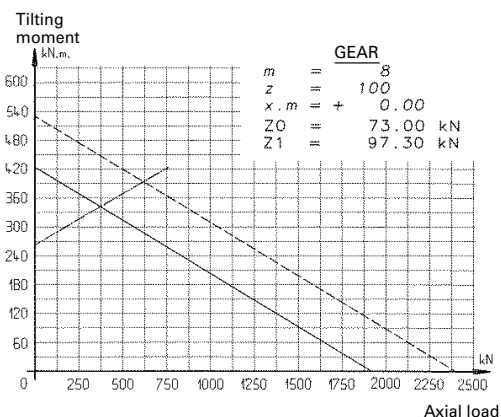
Estimated weight : 144. kg



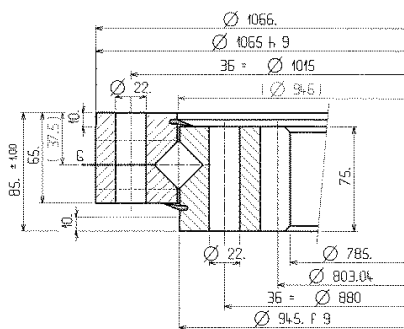
07.0885.01



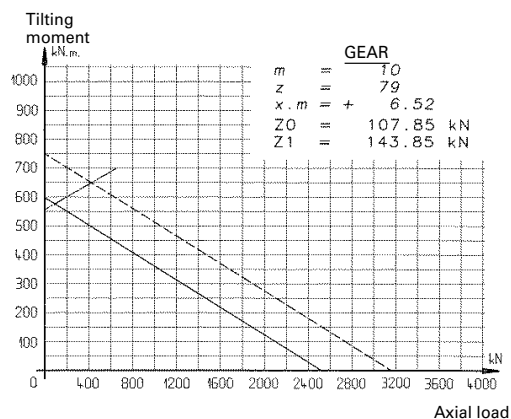
Estimated weight : 120. kg



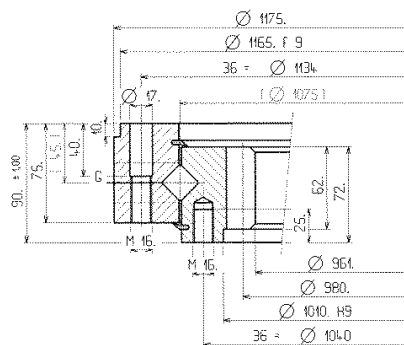
07.0946.05



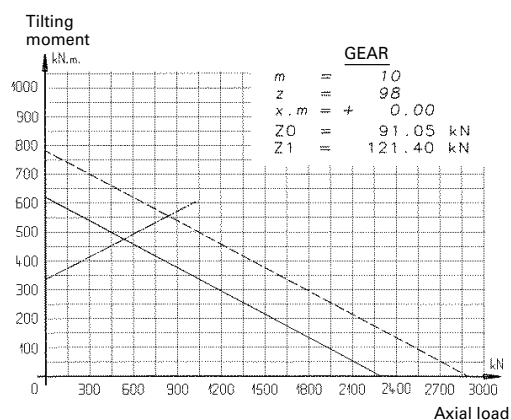
Estimated weight : 190. kg



07.1075.01



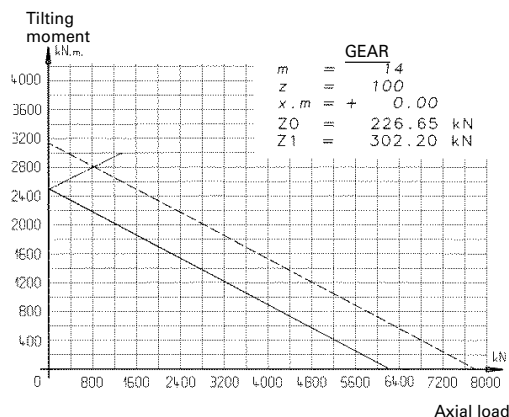
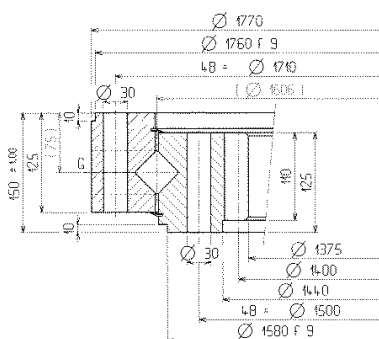
Estimated weight : 179. kg



REFER TO PAGES 54 AND 55 FOR THE INTERPRETATION OF DRAWINGS AND CURVES

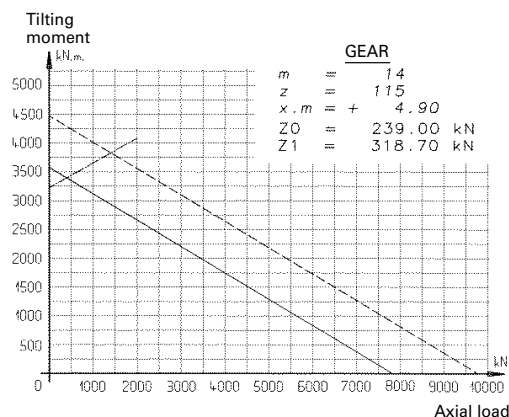
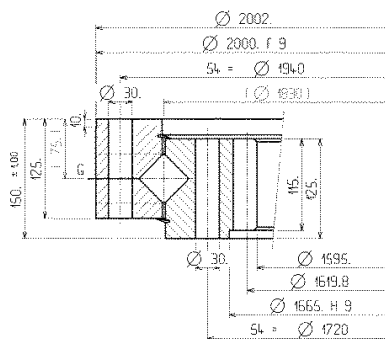


07.1606.02



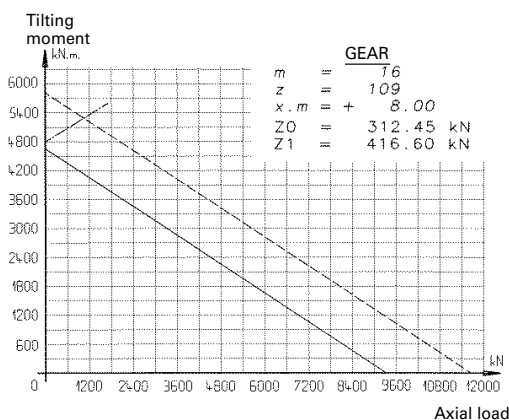
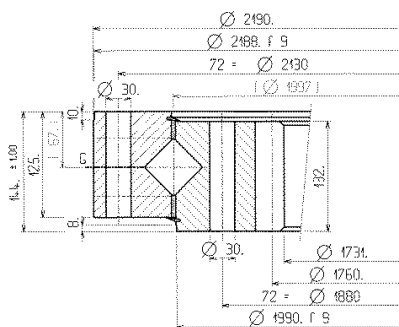
Estimated weight : 802. kg

07.1830.04



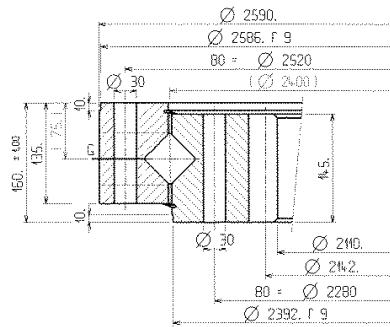
Estimated weight : 951. kg

07.1997.04

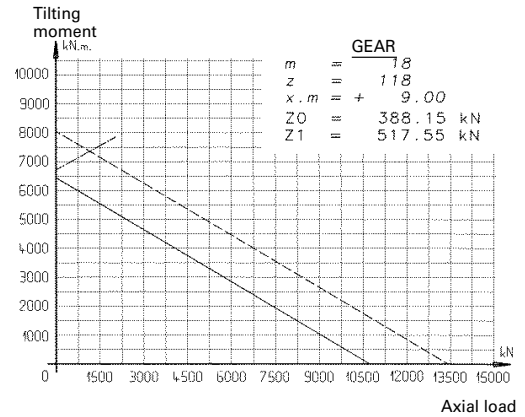
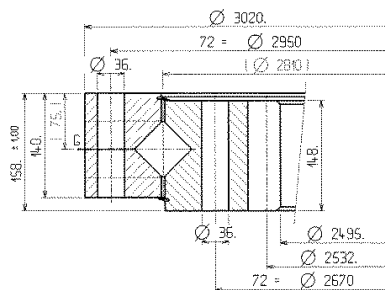


Estimated weight : 1199. kg

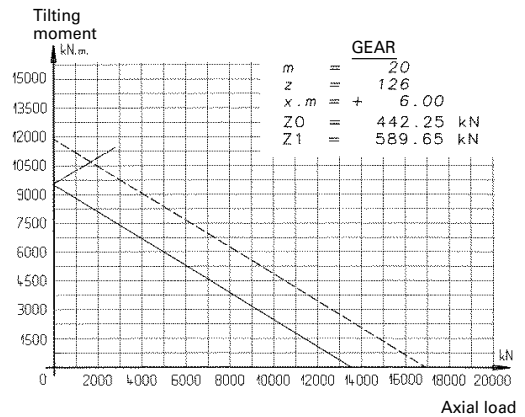
REFER TO PAGES 54 AND 55 FOR THE INTERPRETATION OF DRAWINGS AND CURVES

**07.2400.00**


Estimated weight : 1639. kg

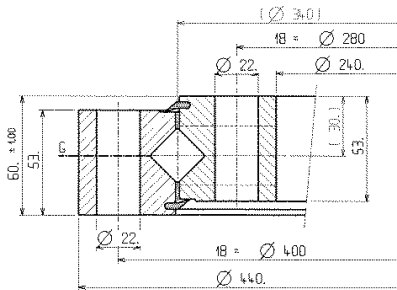

**07.2810.09**


Estimated weight : 2154. kg

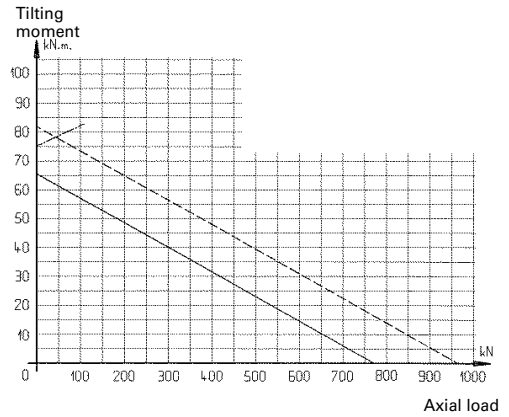




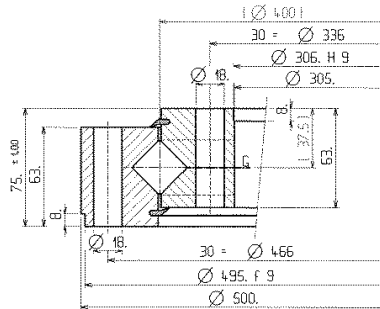
## 08.0340.04



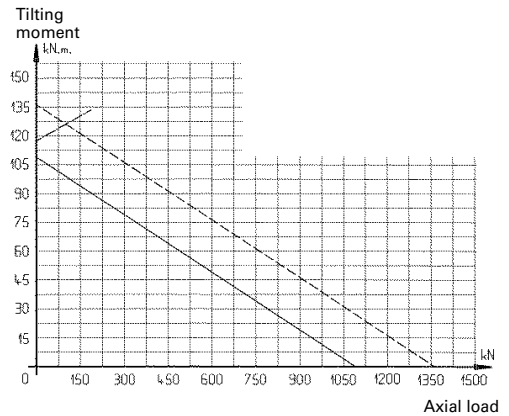
Estimated weight : 37. kg



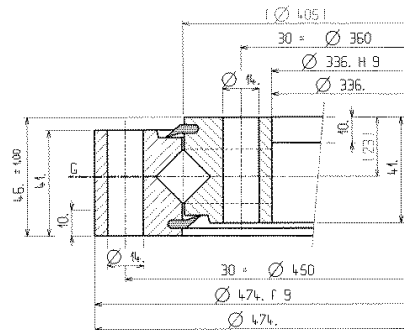
## 08.0400.00



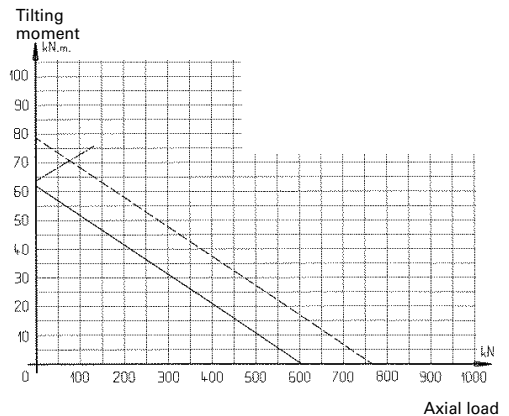
Estimated weight : 51. kg



## 08.0405.05



Estimated weight : 24. kg



[illegible]

The graph shows the relationship between Tilting moment (kN.m) and Axial load (kN). The y-axis ranges from 0 to 200 kN.m, and the x-axis ranges from 0 to 2000 kN. Two lines are plotted:

- Line 1: Starts at (0, 140) and ends at (1300, 0).
- Line 2: Starts at (0, 190) and ends at (1500, 0).

The intersection point is at approximately (350, 165).

Technical drawing of a shaft assembly. The drawing shows a shaft with a central section of length 100 mm, indicated by a dimension line with arrows. The shaft has a diameter of  $\varnothing 57 \pm 0.05$  mm. The central section is flanked by two sections of length 60 mm each, indicated by dimension lines. The shaft is supported by bearings, with a bearing housing diameter of  $\varnothing 70$  mm. The shaft has a keyway with a width of 10 mm and a depth of 6 mm. The key has a width of 10 mm and a height of 6 mm. The shaft is also shown with a section line indicating a cross-section. The drawing includes various dimension lines and tolerances, such as  $\varnothing 57 \pm 0.05$ ,  $\varnothing 70$ ,  $\varnothing 50.8$ ,  $\varnothing 48.0$ ,  $\varnothing 47.9$ ,  $\varnothing 64.0$ , and  $\varnothing 57.0$ . The drawing is labeled with '77 ± 100', '60', '10', '6', '36 =  $\varnothing 50.8$ ', ' $\varnothing 48.0$  H 9', ' $\varnothing 47.9$ ', '10', '6', '36 =  $\varnothing 64.0$ ', ' $\varnothing 57.0$ ', and ' $\varnothing 70$ '.

The graph shows the relationship between Tilting moment (kN.m) and Axial load (kN) for a 1000 mm diameter column. The y-axis represents Tilting moment in kN.m, ranging from 0 to 300. The x-axis represents Axial load in kN, ranging from 0 to 2000. Two lines are plotted, representing different design scenarios. Line 1 starts at (0, 270) and ends at (1500, 0). Line 2 starts at (0, 240) and ends at (2000, 0). The intersection point is at approximately (350, 250).

| Axial load (kN) | Tilting moment (kN.m) - Line 1 | Tilting moment (kN.m) - Line 2 |
|-----------------|--------------------------------|--------------------------------|
| 0               | 270                            | 240                            |
| 350             | 250                            | 250                            |
| 1000            | 180                            | 210                            |
| 1500            | 0                              | 150                            |
| 2000            | -                              | 0                              |

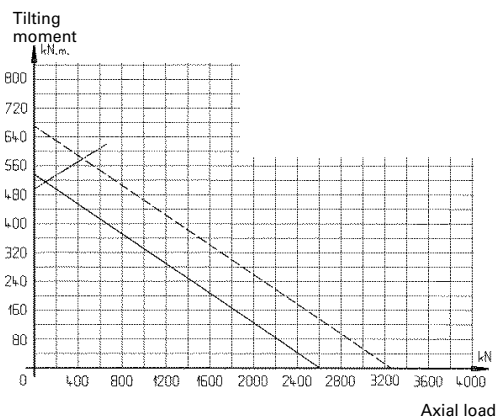
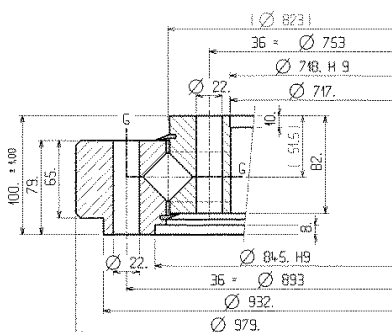
Technical drawing of a mechanical assembly (Fig. 10) showing a cross-section of a shaft with a gear and a coupling. The drawing includes dimensions for diameters, lengths, and tolerances.

Dimensions and Tolerances:

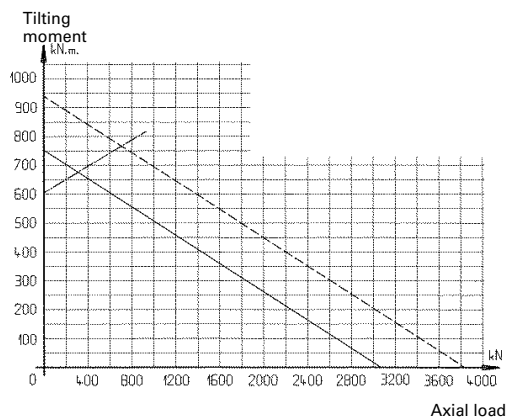
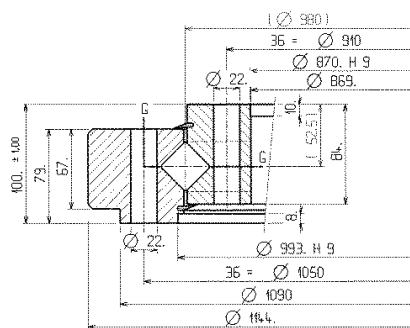
- Top diameters:  $\varnothing 67.5$ ,  $18 = \varnothing 60.4$ ,  $\varnothing 57.4$  H 9,  $\varnothing 57.3$ .
- Bottom diameters:  $\varnothing 22$ ,  $\varnothing 68.2$  H 9,  $18 = \varnothing 75.3$ ,  $\varnothing 78.1$ ,  $\varnothing 81.6$ .
- Lengths: 90, 100, 73, 65, 10, 1.25, 70, 8.
- Other labels: G, 10.

The graph plots Tilting moment (kN.m) on the y-axis against Axial load (kN) on the x-axis. The y-axis ranges from 0 to 500 in increments of 50. The x-axis ranges from 0 to 3000 in increments of 300. Three lines are shown: a dashed line representing the full column capacity (0, 380) to (1800, 0), a solid line representing the column with 10% eccentricity (0, 300) to (2400, 0), and a solid line representing the column with 20% eccentricity (0, 180) to (800, 300).

73

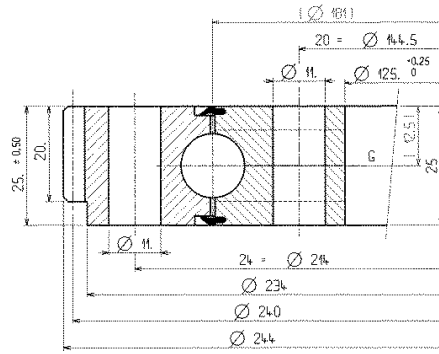
**08.0823.08**


Estimated weight : 193. kg

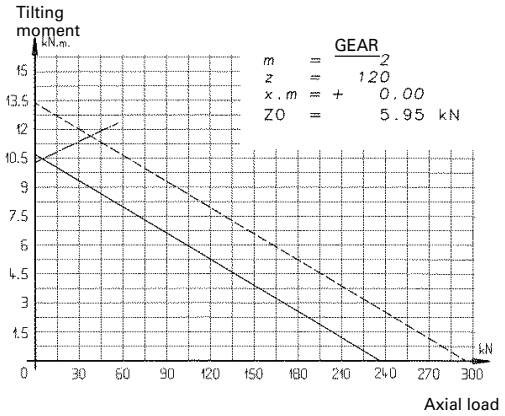
**08.0980.06**


Estimated weight : 248. kg

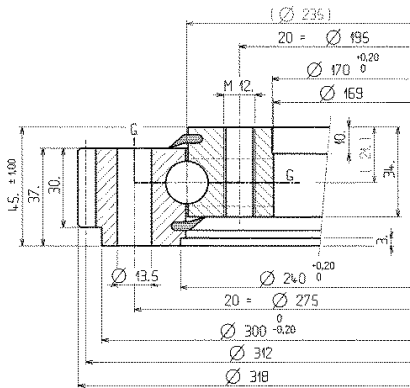
01.0181.02



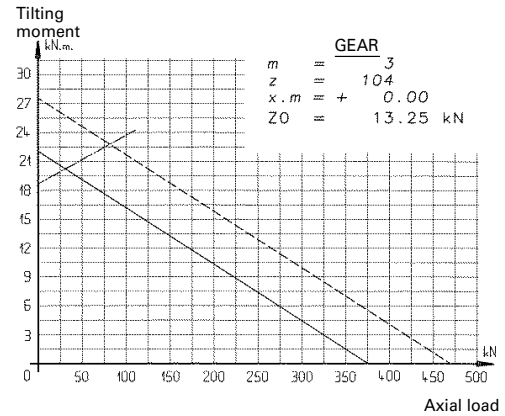
Estimated weight : 5. kg



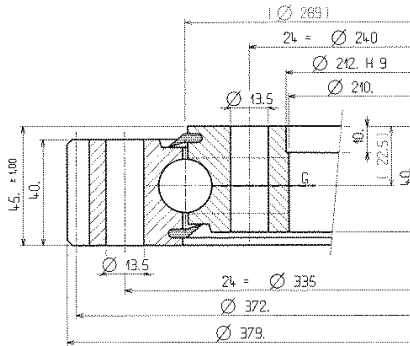
01.0235.00



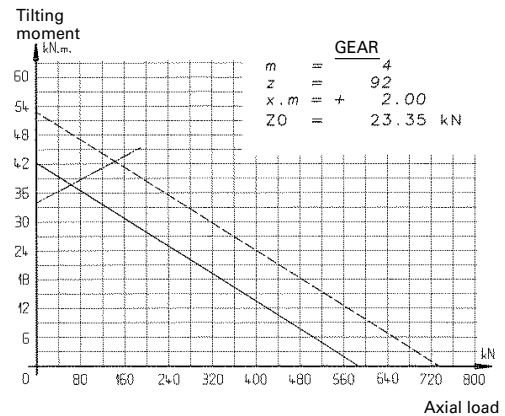
Estimated weight : 14. kg



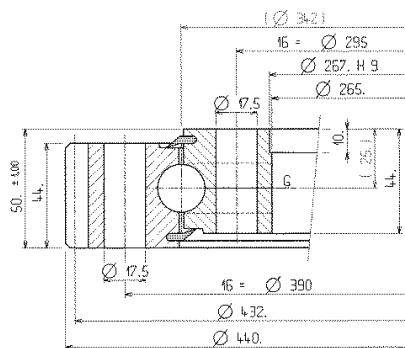
01.0289.06



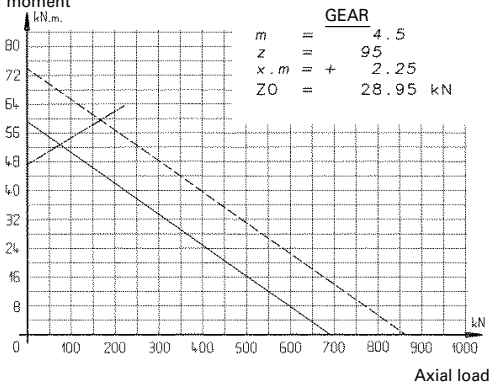
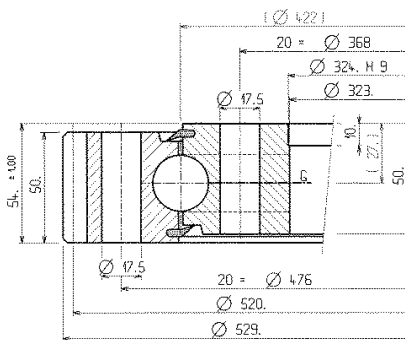
Estimated weight : 20. kg



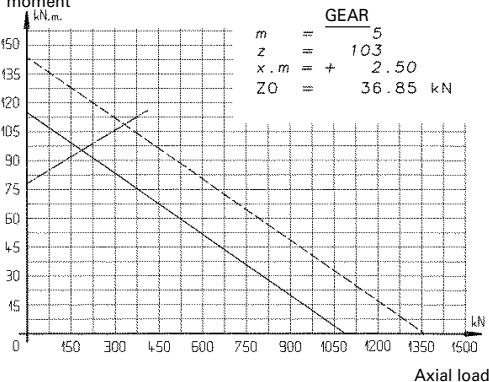
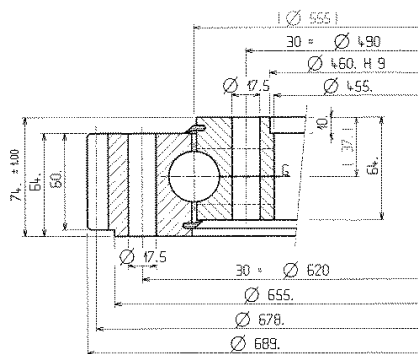
REFER TO PAGES 54 AND 55 FOR THE INTERPRETATION OF DRAWINGS AND CURVES

**01.0342.00**


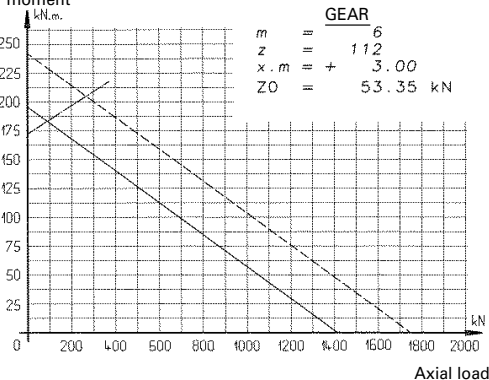
Estimated weight : 28. kg

 Tilting moment  
kN.m.

**01.0422.01**


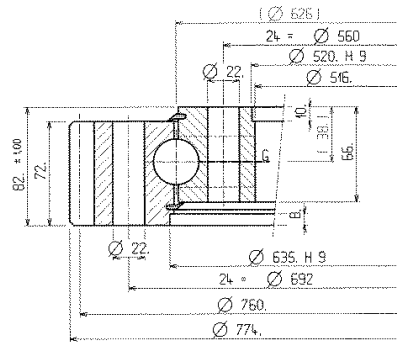
Estimated weight : 45. kg

 Tilting moment  
kN.m.

**01.0555.01**


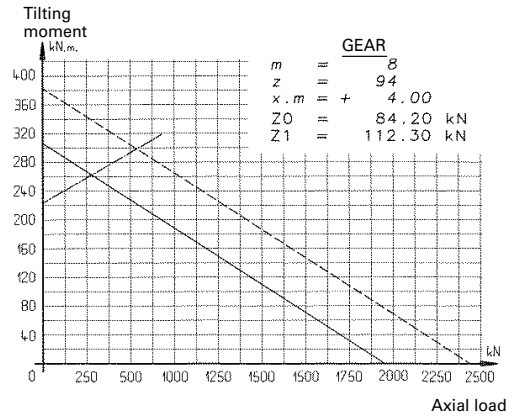
Estimated weight : 89. kg

 Tilting moment  
kN.m.


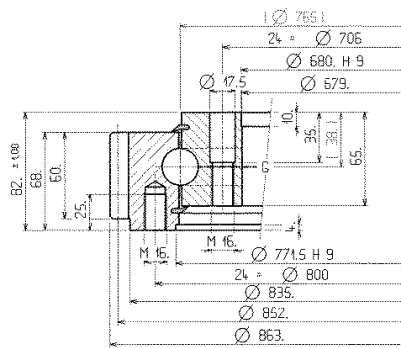
01.0626.00



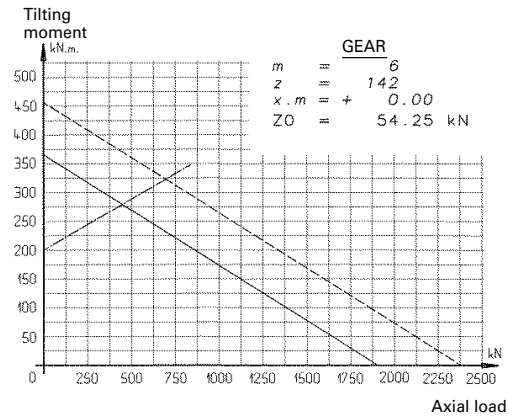
Estimated weight : 118. kg



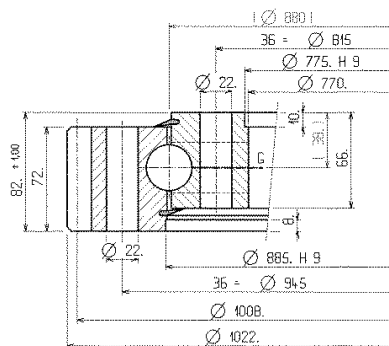
01.0765.01



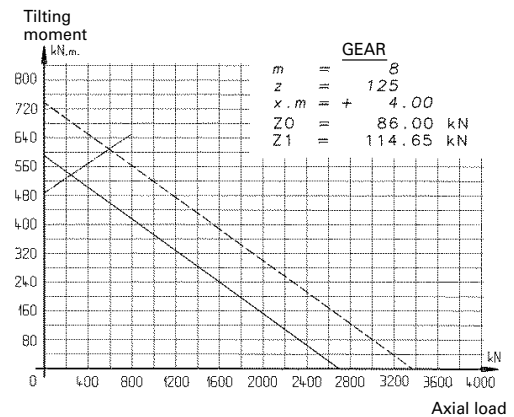
Estimated weight : 102. kg



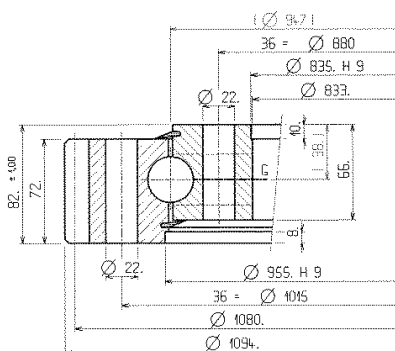
01.0880.00



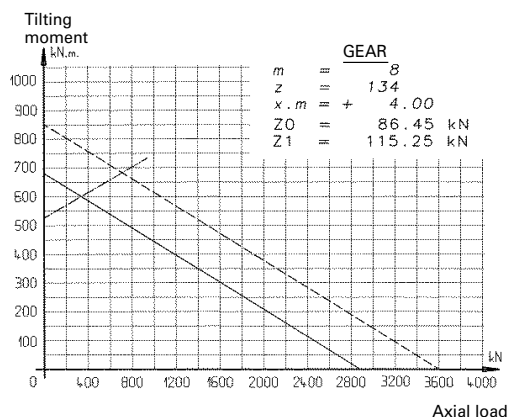
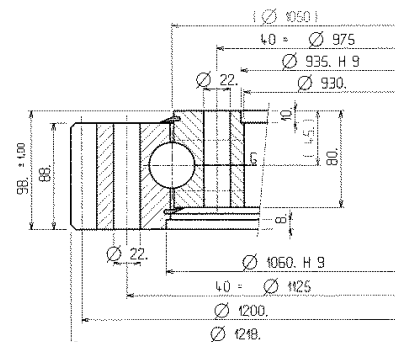
Estimated weight : 159. kg



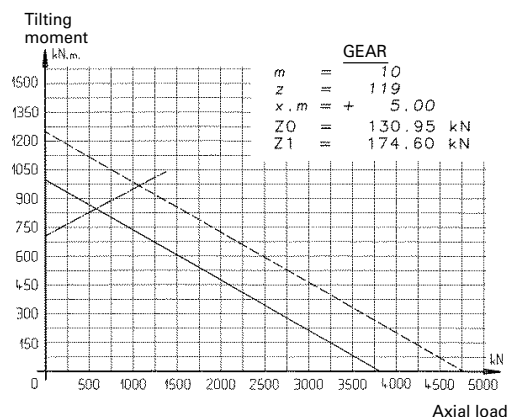
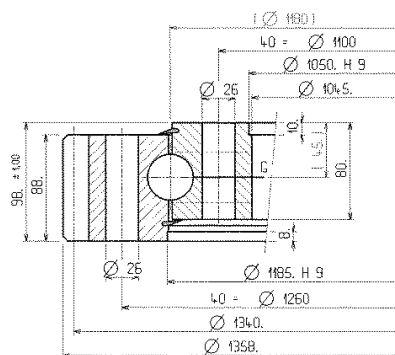
REFER TO PAGES 54 AND 55 FOR THE INTERPRETATION OF DRAWINGS AND CURVES

**01.0947.00**


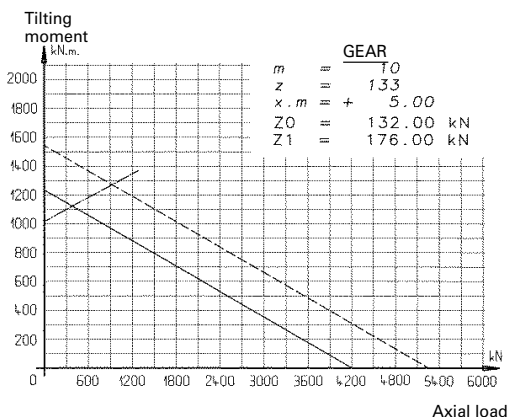
Estimated weight : 179. kg


**01.1050.00**


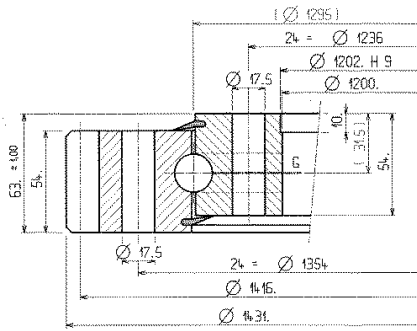
Estimated weight : 268. kg


**01.1180.00**


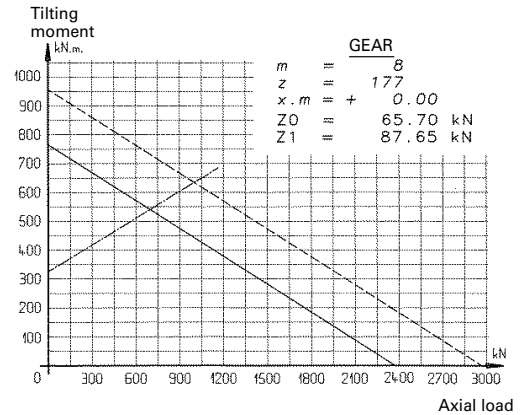
Estimated weight : 325. kg



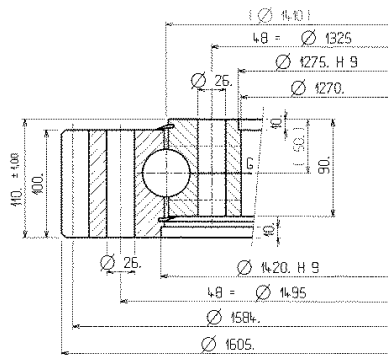
01.1295.01



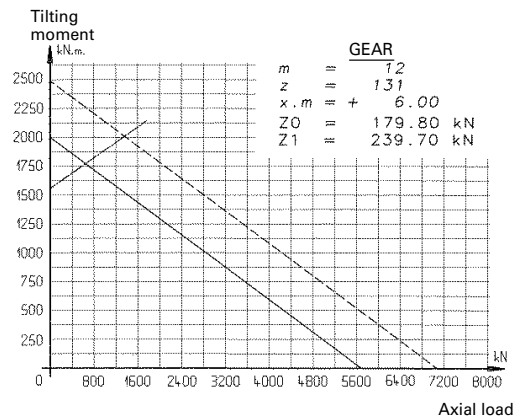
Estimated weight : 176. kg



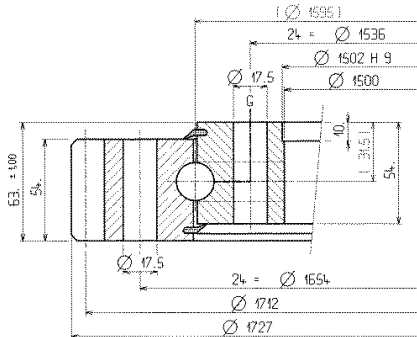
01.1410.00



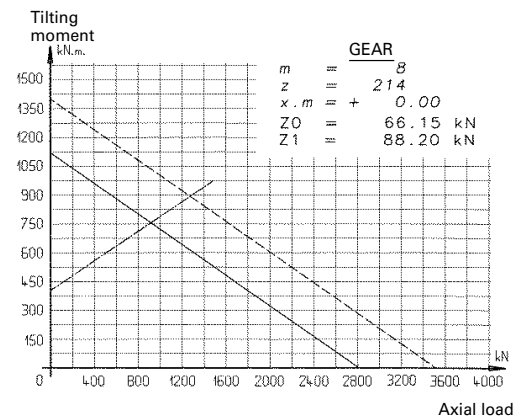
Estimated weight : 469. kg

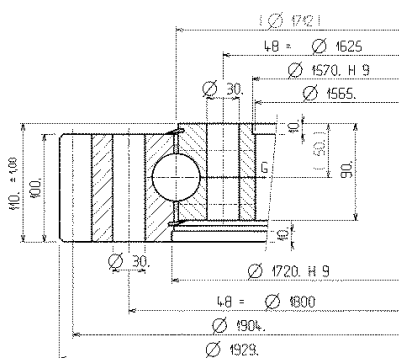


01.1595.00

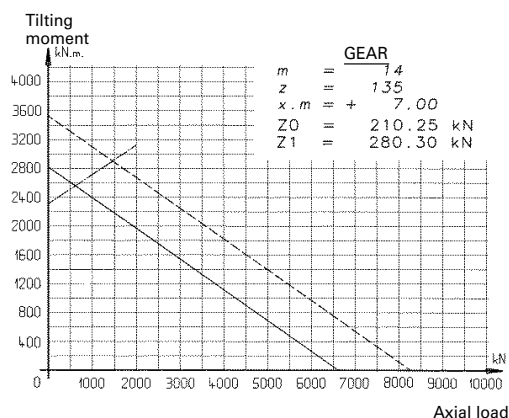
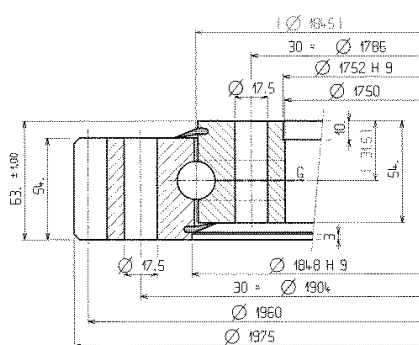


Estimated weight : 213. kg

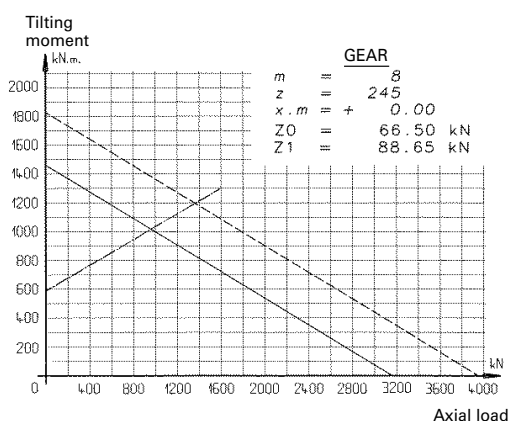
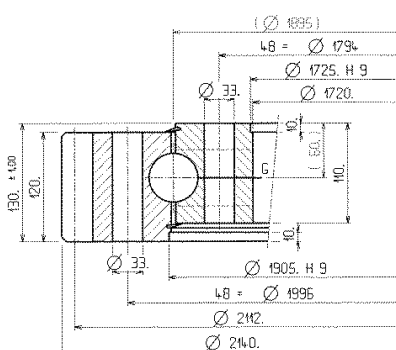


**01.1712.00**


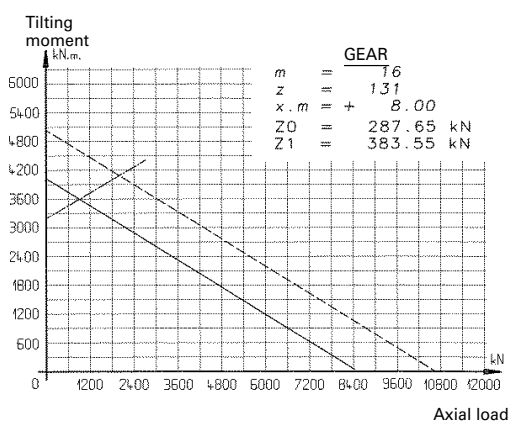
Estimated weight : 617. kg


**01.1845.02**


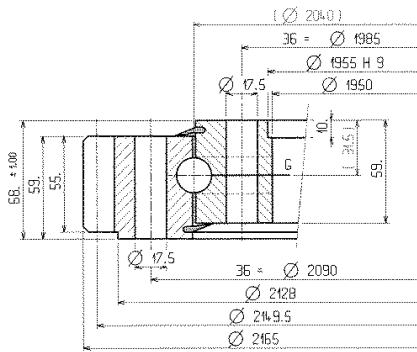
Estimated weight : 244. kg


**01.1895.00**


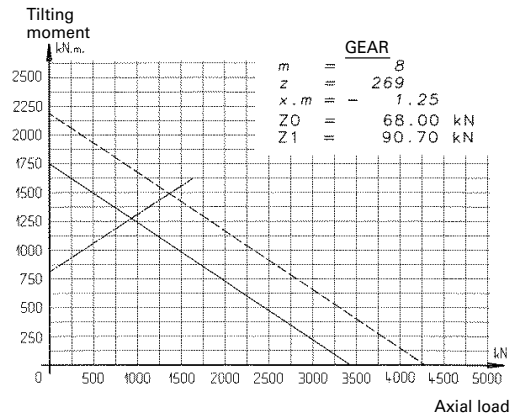
Estimated weight : 953. kg



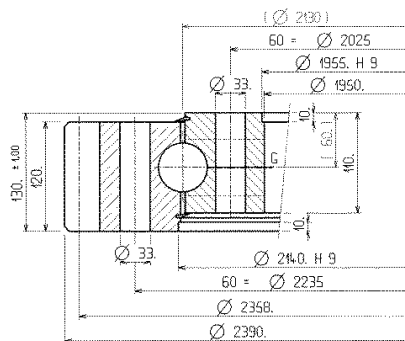
01.2040.03



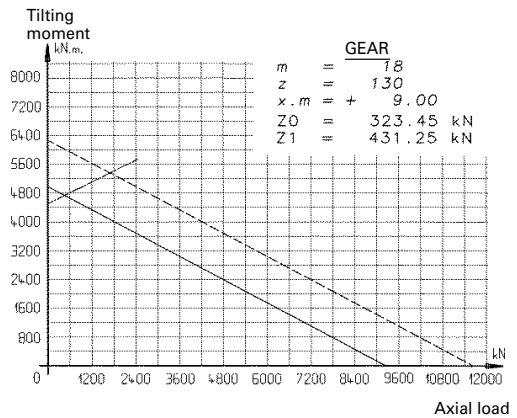
Estimated weight : 278. kg



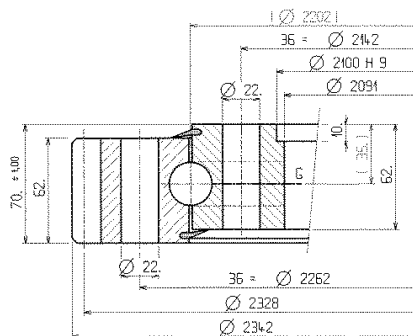
01.2130.00



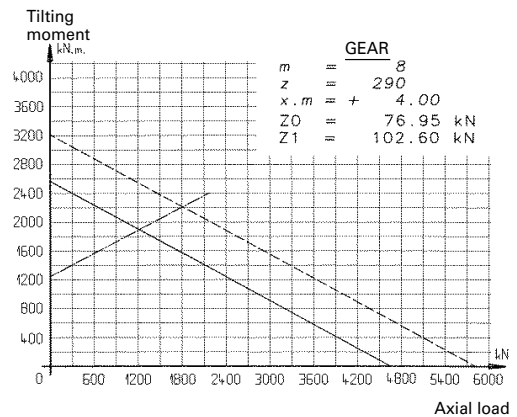
Estimated weight : 1111. kg



01.2202.00

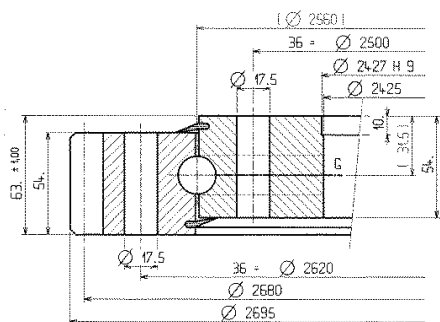


Estimated weight : 373. kg

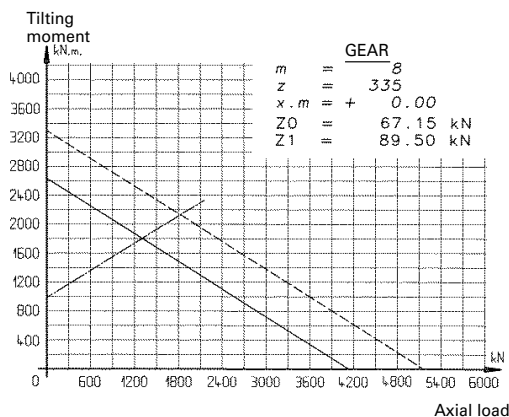


REFER TO PAGES 54 AND 55 FOR THE INTERPRETATION OF DRAWINGS AND CURVES

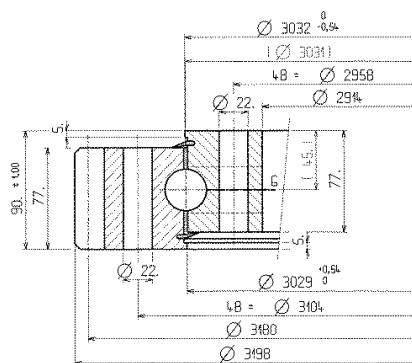
01.2560.01



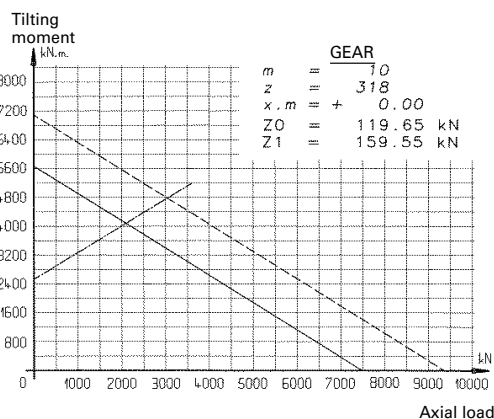
Estimated weight : 411. kg



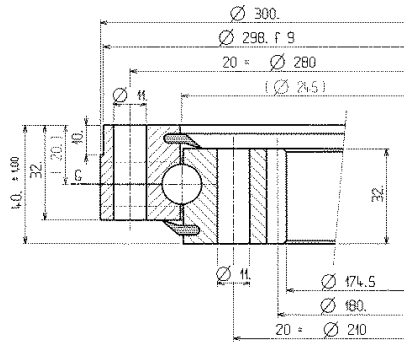
01.3031.00



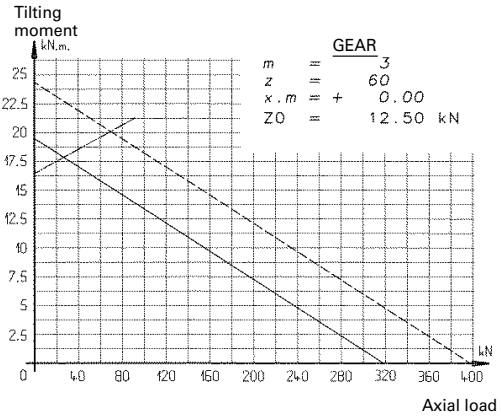
Estimated weight : 716. kg



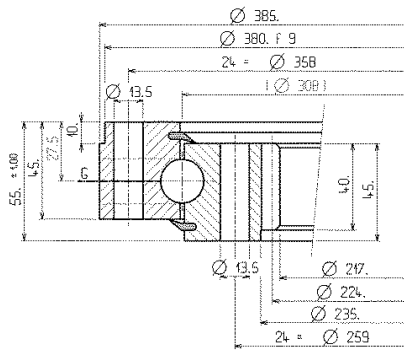
02.0245.00



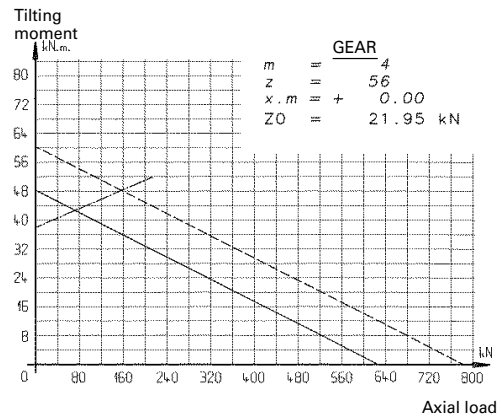
Estimated weight : 10. kg



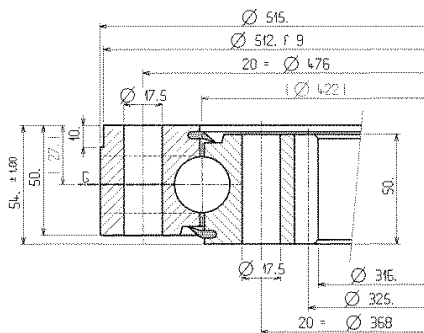
02.0308.01



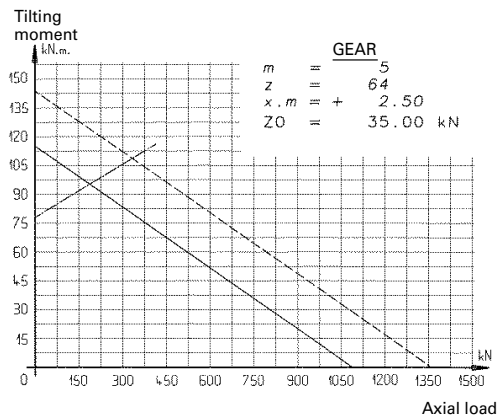
Estimated weight : 24. kg



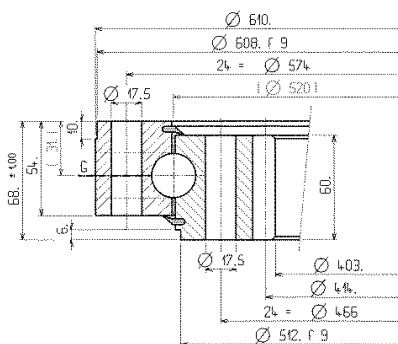
02.0422.00



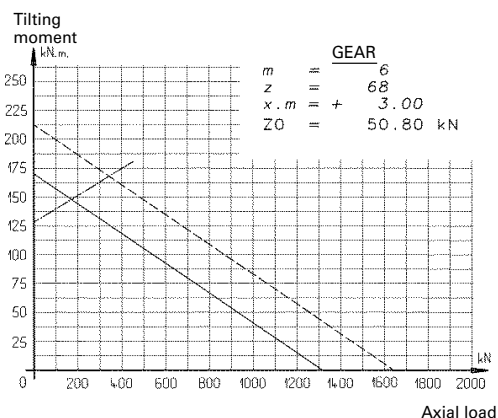
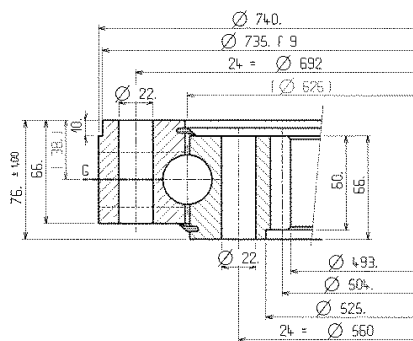
Estimated weight : 44. kg



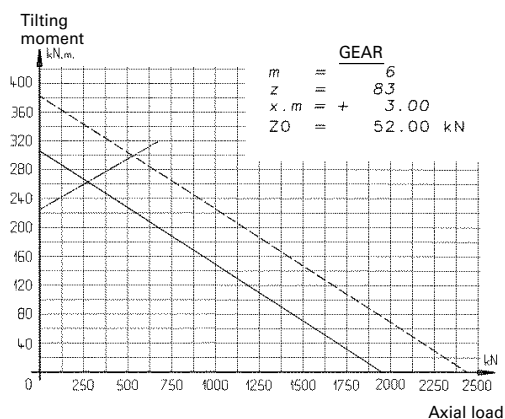
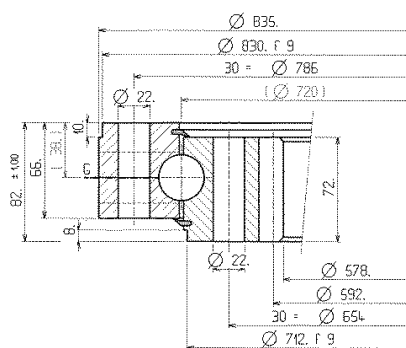
REFER TO PAGES 54 AND 55 FOR THE INTERPRETATION OF DRAWINGS AND CURVES

**02.0520.00**


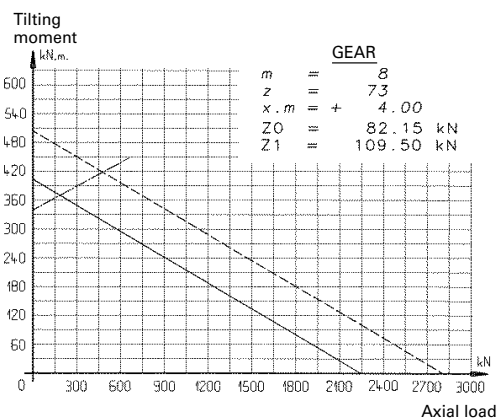
Estimated weight : 63. kg


**02.0626.01**


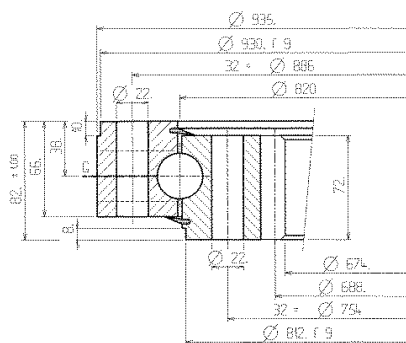
Estimated weight : 105. kg


**02.0720.02**


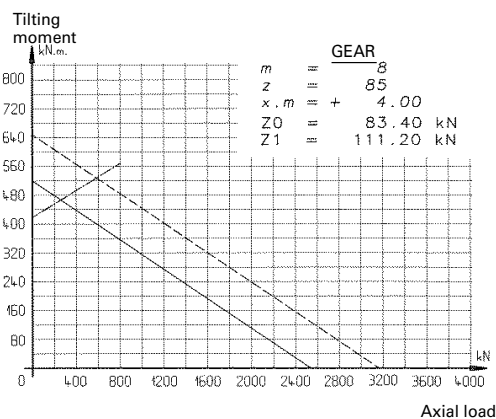
Estimated weight : 130. kg



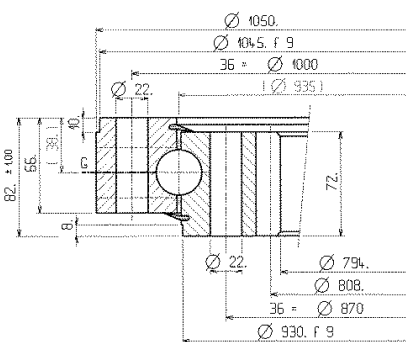
02.0820.00



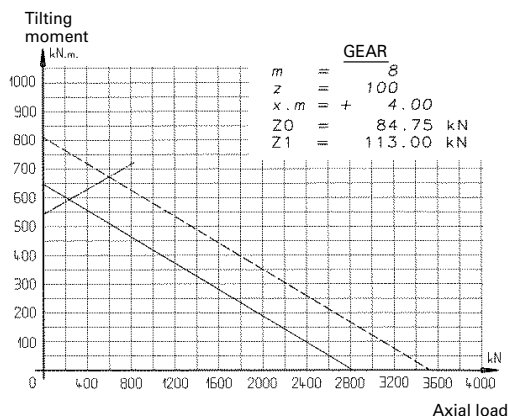
Estimated weight : 150. kg



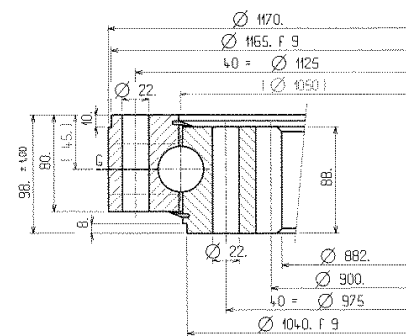
02.0935.00



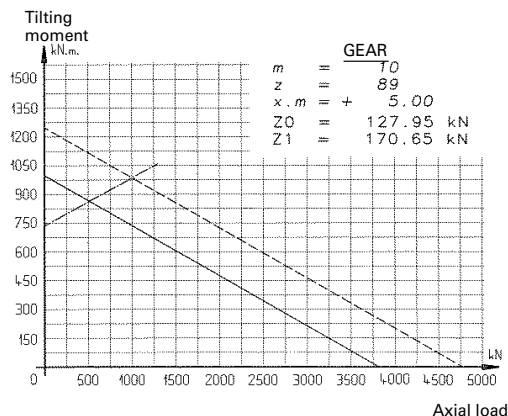
Estimated weight : 168. kg



02.1050.00

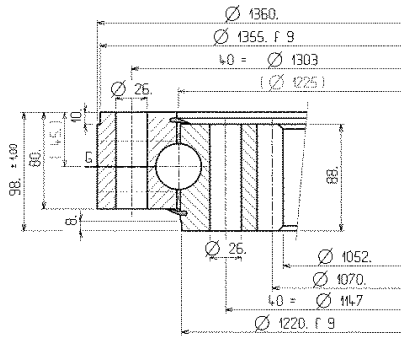


Estimated weight : 258. kg

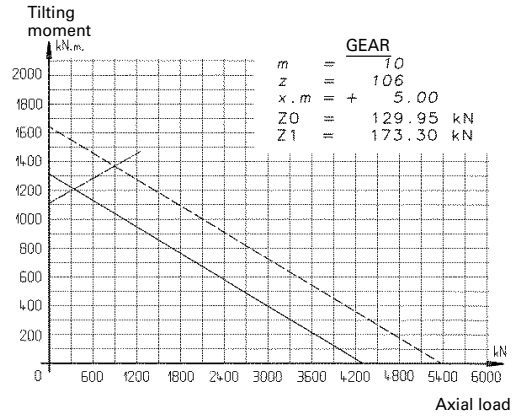


REFER TO PAGES 54 AND 55 FOR THE INTERPRETATION OF DRAWINGS AND CURVES

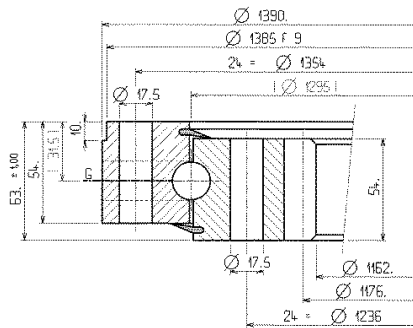
**02.1225.00**



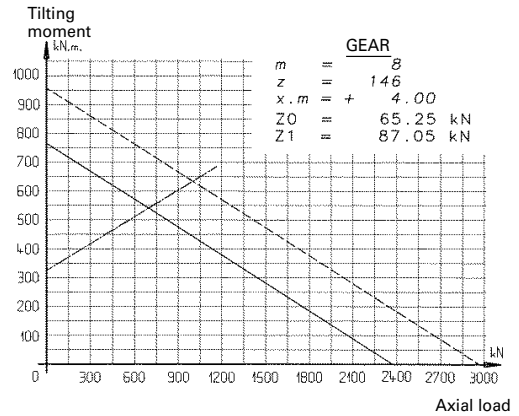
Estimated weight : 321. kg



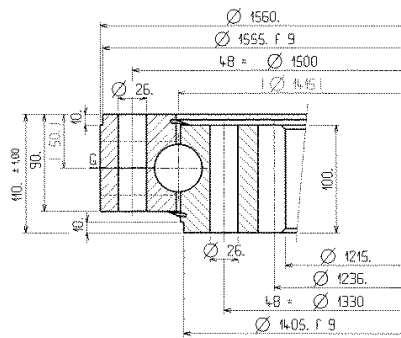
**02.1295.00**



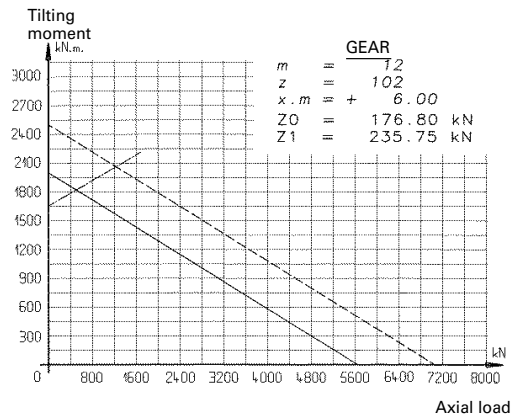
Estimated weight : 171. kg



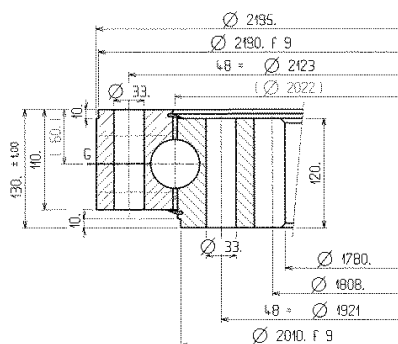
**02.1415.00**



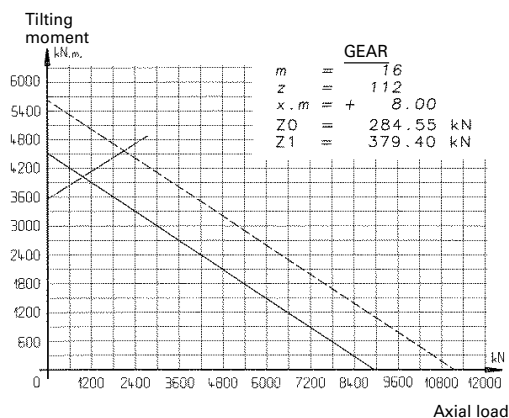
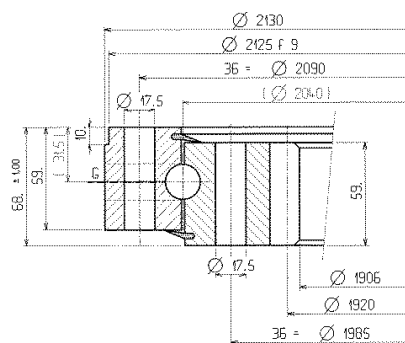
Estimated weight : 471. kg



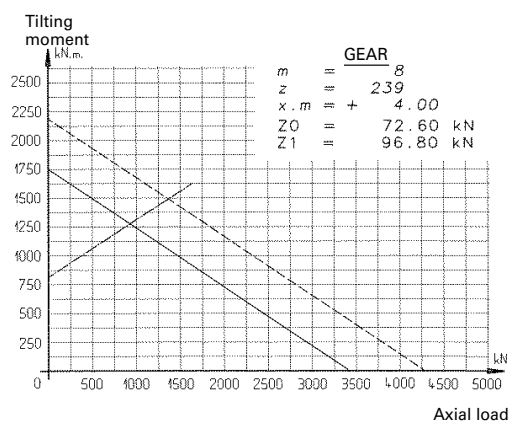
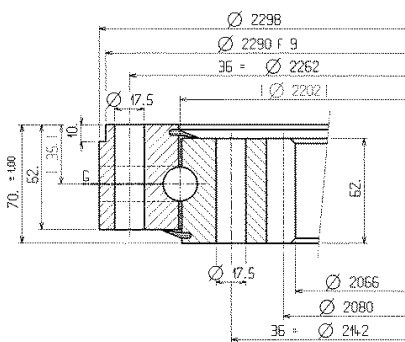


**02.2022.00**


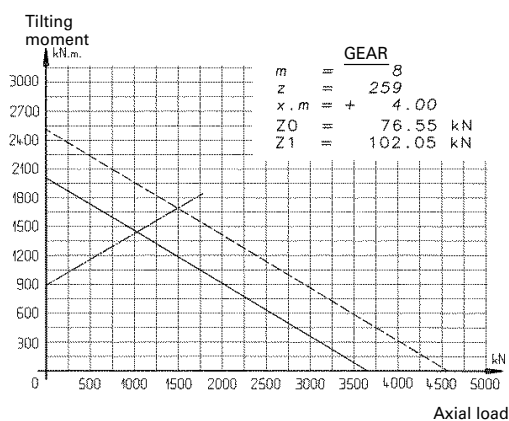
Estimated weight : 979. kg


**02.2040.00**


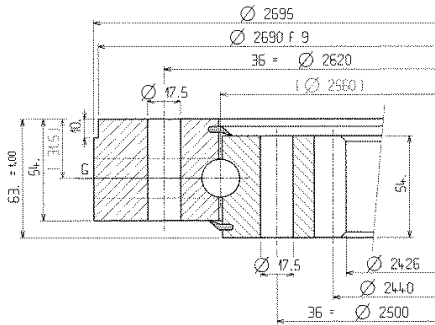
Estimated weight : 290. kg


**02.2202.00**


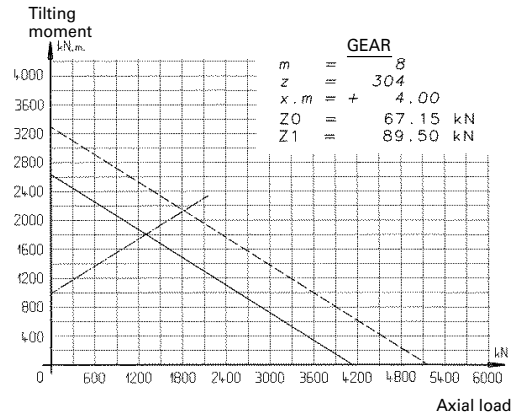
Estimated weight : 343. kg



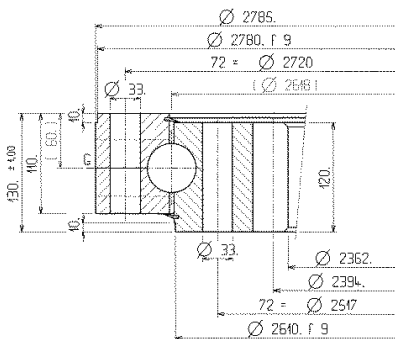
02.2560.00



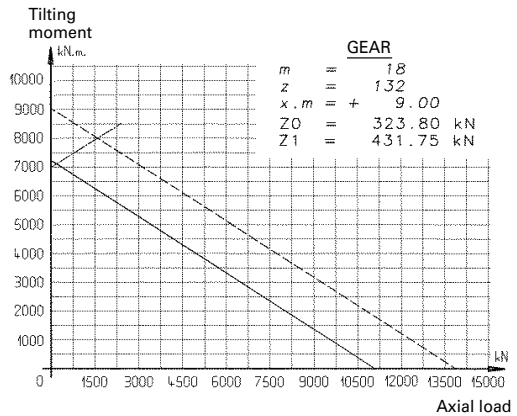
Estimated weight : 414. kg



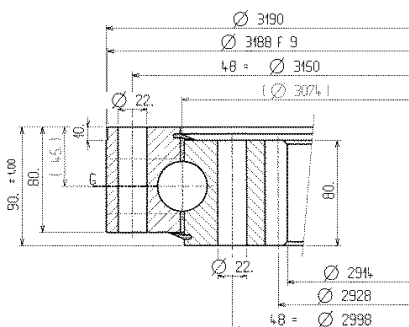
02.2618.00



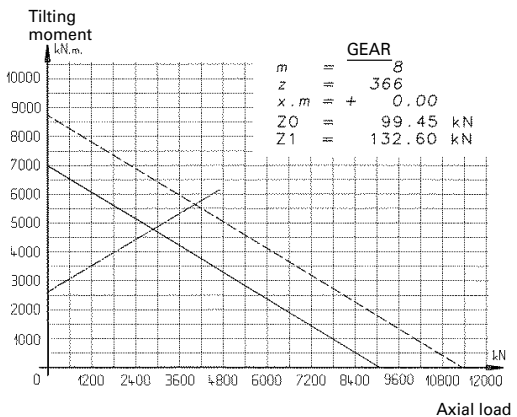
Estimated weight : 1270. kg



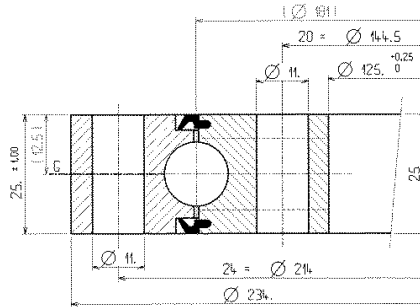
02.3074.01



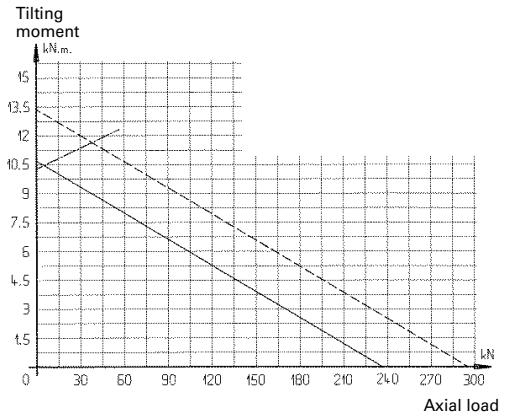
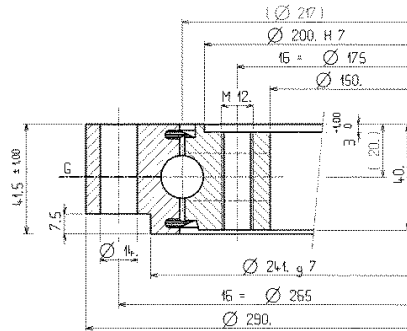
Estimated weight : 735. kg



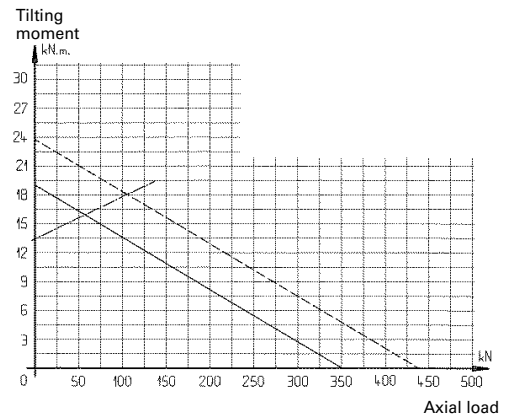
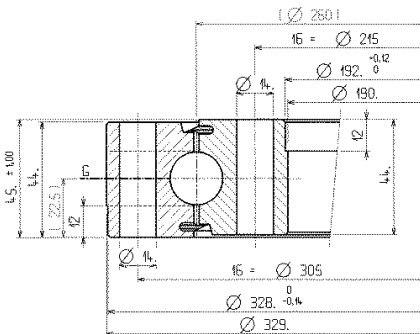
REFER TO PAGES 54 AND 55 FOR THE INTERPRETATION OF DRAWINGS AND CURVES

**03.0181.07**


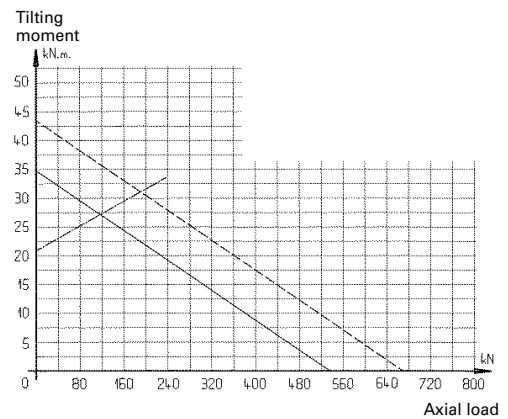
Estimated weight : 5. kg


**03.0217.00**


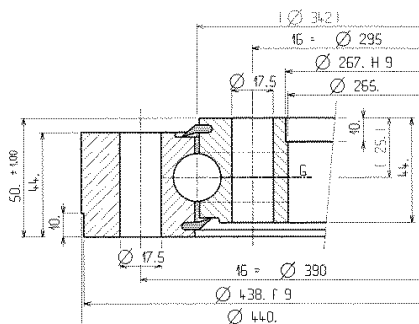
Estimated weight : 14. kg


**03.0260.00**


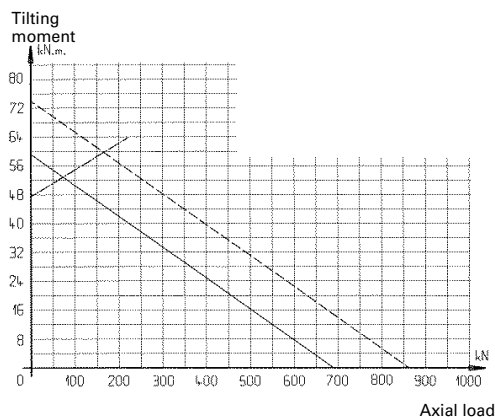
Estimated weight : 17. kg



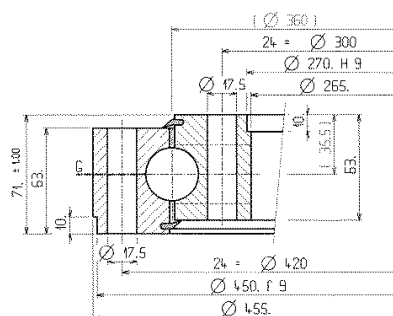
03.0342.05



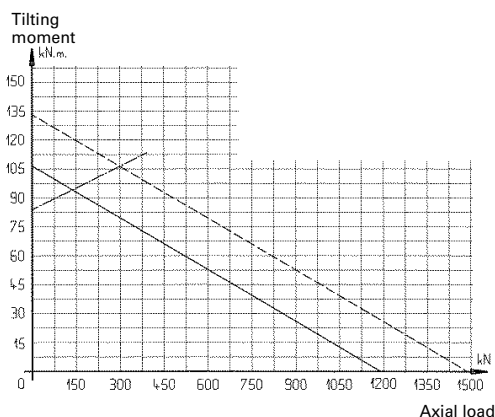
Estimated weight : 29. kg



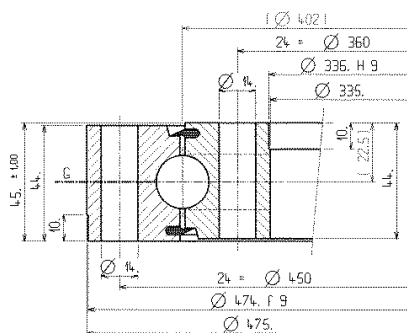
03.0360.00



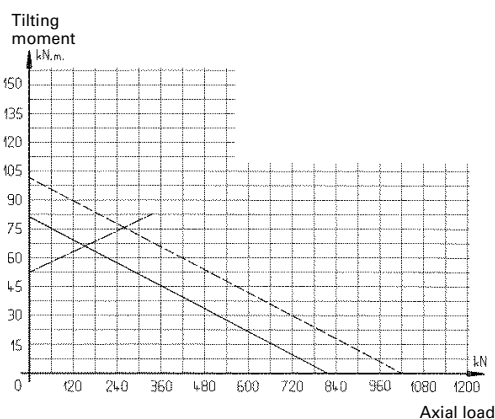
Estimated weight : 45. kg



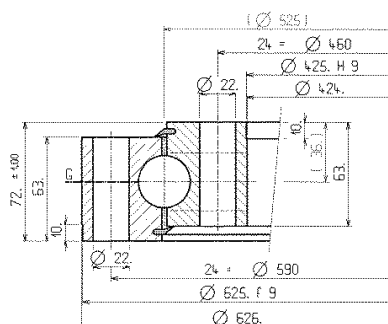
03.0402.00



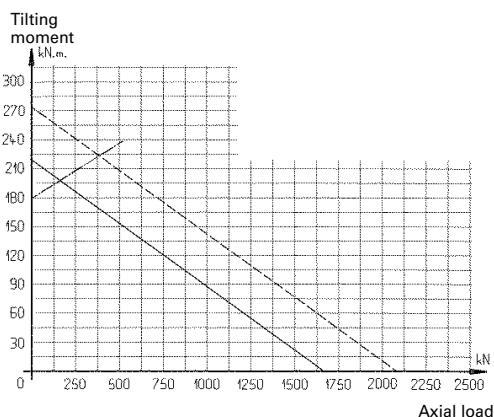
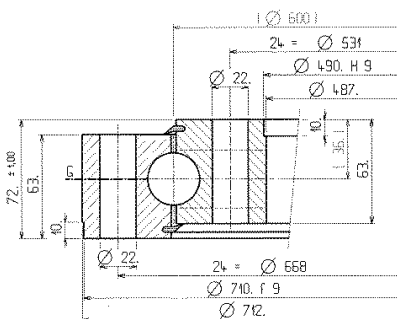
Estimated weight : 30. kg



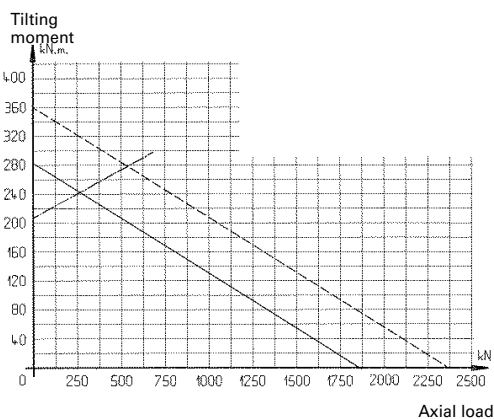
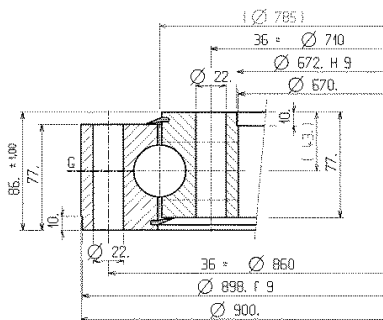
REFER TO PAGES 54 AND 55 FOR THE INTERPRETATION OF DRAWINGS AND CURVES

**03.0525.01**


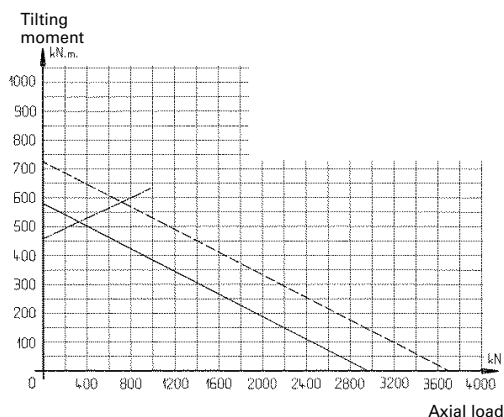
Estimated weight : 70. kg


**03.0600.02**


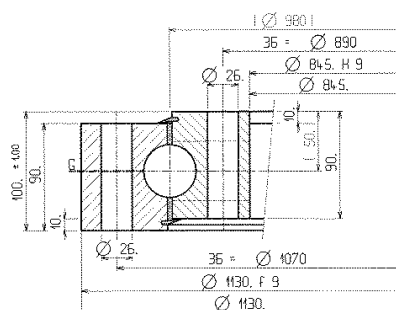
Estimated weight : 91. kg


**03.0785.00**


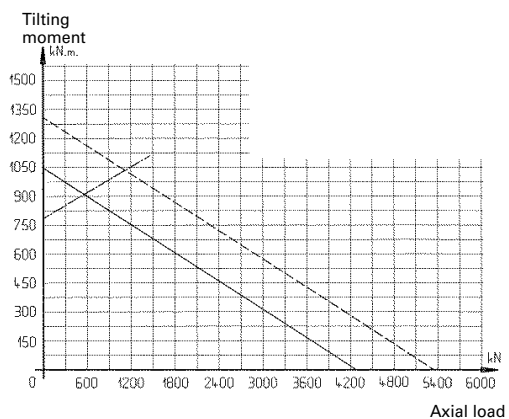
Estimated weight : 148. kg



03.0980.02



Estimated weight : 271. kg





# LIGHT SERIES BEARINGS

## REFERENCES - EXTERNAL GEAR

FAMILIES : 21 - 24 - 27

|            |              | MEASUREMENTS IN MILLIMETERS |     |      |           |    |      |    |       |     |      |                        |  |
|------------|--------------|-----------------------------|-----|------|-----------|----|------|----|-------|-----|------|------------------------|--|
| REFERENCES | WEIGHT<br>Kg | DIMENSIONS                  |     |      | FASTENING |    |      |    | GEARS |     |      | Teeth resistance<br>kN |  |
|            |              | De                          | Di  | Bi   | Fe        | Ne | Fi   | Ni | m     | z   | D    |                        |  |
| 21 0411 01 | 32           | 505                         | 304 | 368  | 455       | 10 | 332  | 12 | 5     | 99  | 495  | 33,8                   |  |
| 21 0541 01 | 44           | 640                         | 434 | 498  | 585       | 14 | 462  | 14 | 6     | 105 | 630  | 41                     |  |
| 21 0641 01 | 52           | 742                         | 534 | 598  | 685       | 16 | 562  | 16 | 6     | 122 | 732  | 41                     |  |
| 21 0741 01 | 60           | 840                         | 634 | 698  | 785       | 18 | 662  | 16 | 6     | 138 | 828  | 41                     |  |
| 21 0841 01 | 68           | 950                         | 734 | 798  | 885       | 18 | 762  | 18 | 8     | 117 | 936  | 55                     |  |
| 21 0941 01 | 76           | 1046                        | 834 | 898  | 985       | 20 | 862  | 20 | 8     | 129 | 1032 | 55                     |  |
| 21 1091 01 | 86           | 1198                        | 984 | 1048 | 1135      | 22 | 1012 | 20 | 8     | 148 | 1184 | 55                     |  |

Families 21 : class I    24 : class III    27 : class V    have all the same geometry

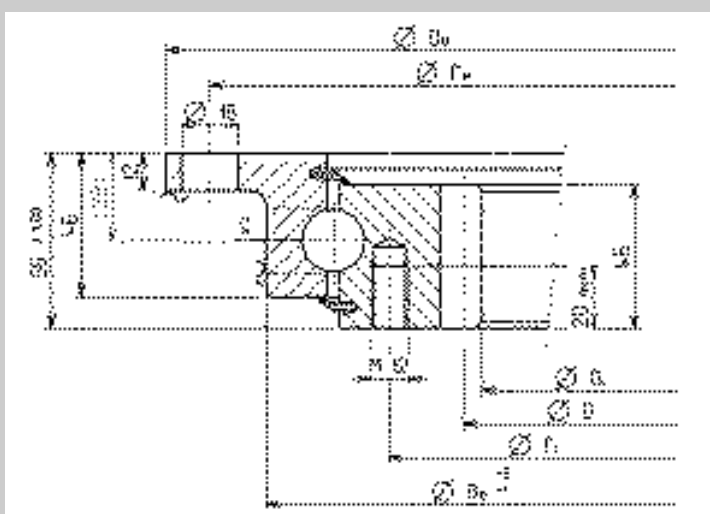
The characteristics of these classes are tabulated on the table page 106.

Please consult us, for the class suitable for your application.

# LIGHT SERIES BEARINGS

## DRAWING AND CURVES - INTERNAL GEAR

FAMILIES : 22 - 25 - 28



The mounting holes are equispaced.

Ne : number of holes in the outer ring.

Ni : number of holes in the inner ring.

Tapping depth in the inner ring :

20 mm minimum.

G = 4 equispaced grease nipples  
(M8 X 1.00) mounted on the outer ring.

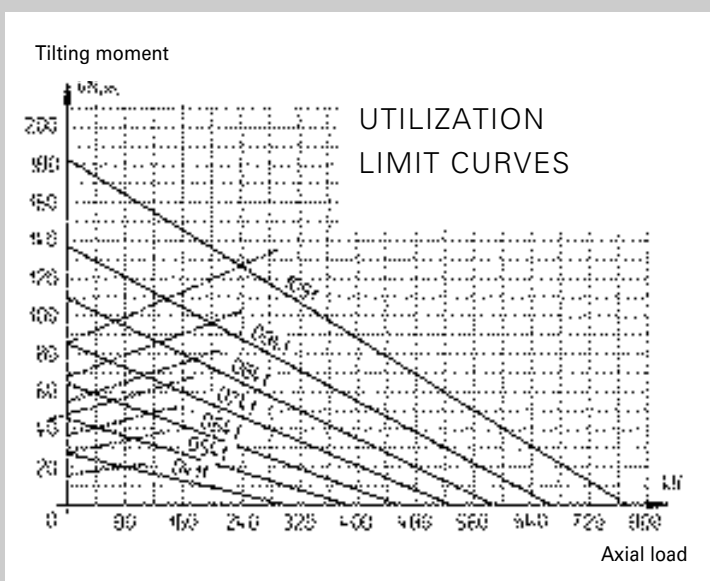
Material : Improved XC 45, code Z.

These bearings are also available without drilling. The references are identical except for the last two digits :

00 : without bolt holes,

01 : standard drilling.

The values on "Light Series" capacity curves can be read directly ; you do not have to add any factors.



# LIGHT SERIES BEARINGS

## REFERENCES - INTERNAL GEAR

FAMILIES : 22 - 25 - 28

|            |              | MEASUREMENTS IN MILLIMETERS |     |      |           |    |      |    |       |     |      |                        |  |
|------------|--------------|-----------------------------|-----|------|-----------|----|------|----|-------|-----|------|------------------------|--|
| REFERENCES | WEIGHT<br>Kg | DIMENSIONS                  |     |      | FASTENING |    |      |    | GEARS |     |      | Teeth Resistance<br>kN |  |
|            |              | De                          | Di  | Be   | Fe        | Ne | Fi   | Ni | m     | z   | D    |                        |  |
| 22 0411 01 | 31           | 518                         | 325 | 454  | 490       | 8  | 375  | 12 | 5     | 67  | 335  | 32,4                   |  |
| 22 0541 01 | 41           | 648                         | 445 | 584  | 620       | 10 | 505  | 16 | 6     | 76  | 456  | 40,3                   |  |
| 22 0641 01 | 48           | 748                         | 546 | 684  | 720       | 12 | 605  | 18 | 6     | 93  | 558  | 40,3                   |  |
| 22 0741 01 | 55           | 848                         | 649 | 784  | 820       | 12 | 705  | 20 | 6     | 110 | 660  | 40,3                   |  |
| 22 0841 01 | 63           | 948                         | 736 | 884  | 920       | 14 | 805  | 20 | 8     | 94  | 752  | 54,3                   |  |
| 22 0941 01 | 71           | 1048                        | 840 | 984  | 1020      | 16 | 905  | 22 | 8     | 107 | 856  | 54,3                   |  |
| 22 1091 01 | 80           | 1198                        | 986 | 1134 | 1170      | 16 | 1055 | 24 | 8     | 125 | 1000 | 54,3                   |  |

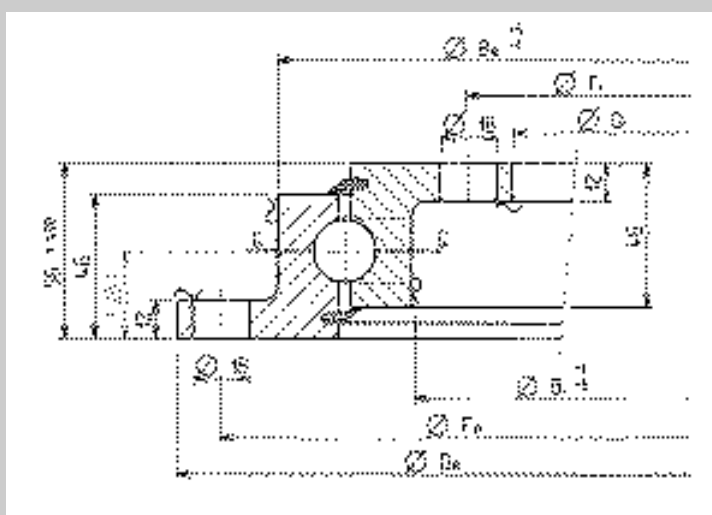
Families 22 : classel 25 : class III 28 : class V have all the same geometry.

The characteristics of these classes are tabulated on the table page 106.

Please consult us, for the class suitable for your application.

# LIGHT SERIES BEARINGS

## DRAWING AND CURVES - WITHOUT GEAR

**FAMILIES : 23 - 26 - 29**


The mounting holes are equispaced.

Ne : number of holes in the outer ring.

Ni : number of holes in the inner ring.

G = 4 equispaced grease nipples  
(M8 X 1.00) mounted on each ring.

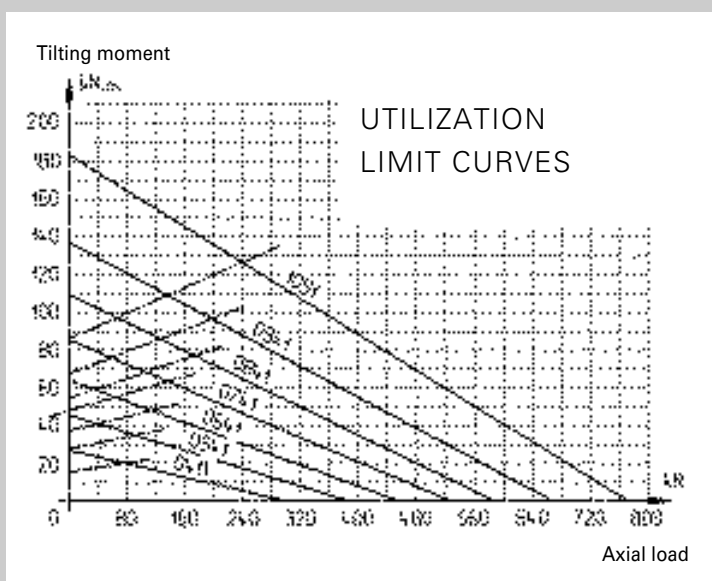
Material : Improved XC 45, code Z.

These bearings are also available without drilling. The references are identical except for the last two digits :

00 : without bolt holes,

01 : standard drilling.

The values on "Light Series" capacity curves can be read directly ; you do not have to add any factors.



# LIGHT SERIES BEARINGS

## REFERENCES - WITHOUT GEAR

FAMILIES : 23 - 26 - 29

| REFERENCES | WEIGHT<br>Kg | MEASUREMENTS IN MILLIMETERS |            |      |      |      |           |      |    |
|------------|--------------|-----------------------------|------------|------|------|------|-----------|------|----|
|            |              | De                          | DIMENSIONS |      |      |      | FASTENING |      |    |
|            |              |                             | Di         | Be   | Bi   | Fe   | Ne        | Fi   | Ni |
| 23 0411 01 | 23           | 518                         | 304        | 454  | 368  | 490  | 8         | 332  | 12 |
| 23 0541 01 | 34           | 648                         | 434        | 584  | 498  | 620  | 10        | 462  | 14 |
| 23 0641 01 | 40           | 748                         | 534        | 684  | 598  | 720  | 12        | 562  | 16 |
| 23 0741 01 | 46           | 848                         | 634        | 784  | 698  | 820  | 12        | 662  | 16 |
| 23 0841 01 | 52           | 948                         | 734        | 884  | 798  | 920  | 14        | 762  | 18 |
| 23 0941 01 | 58           | 1048                        | 834        | 984  | 898  | 1020 | 16        | 862  | 20 |
| 23 1091 01 | 67           | 1198                        | 984        | 1134 | 1048 | 1170 | 16        | 1012 | 20 |

Families 23 : class I 26 : class III 29 : class V have all the same geometry.

The characteristics of these classes are tabulated on the table page 106.

Please consult us, for the class suitable for your application.



# LIGHT SERIES SOLID SECTIONS BEARINGS

## REFERENCES - EXTERNAL GEAR

FAMILIES : 31 - 34 - 37

|            |              | MEASUREMENTS IN MILLIMETERS |      |       |      |           |    |      |    |       |     |      |                        |  |
|------------|--------------|-----------------------------|------|-------|------|-----------|----|------|----|-------|-----|------|------------------------|--|
| REFERENCES | WEIGHT<br>Kg | DIMENSIONS                  |      |       |      | FASTENING |    |      |    | GEARS |     |      | Teeth Resistance<br>kN |  |
|            |              | De                          | Di   | Ce    | Ci   | Fe        | Ne | Fi   | Ni | m     | z   | D    |                        |  |
| 31 0411 01 | 32           | 505                         | 342  | 412,2 | 344  | 455       | 20 | 368  | 24 | 5     | 99  | 495  | 33,8                   |  |
| 31 0541 01 | 46           | 640                         | 472  | 542,5 | 474  | 585       | 28 | 498  | 32 | 6     | 105 | 630  | 41                     |  |
| 31 0641 01 | 55           | 742                         | 572  | 642   | 574  | 685       | 32 | 598  | 36 | 6     | 122 | 732  | 41                     |  |
| 31 0741 01 | 62           | 840                         | 672  | 743   | 674  | 785       | 36 | 698  | 40 | 6     | 138 | 828  | 41                     |  |
| 31 0841 01 | 71           | 950                         | 772  | 842   | 774  | 885       | 36 | 798  | 40 | 8     | 117 | 936  | 55                     |  |
| 31 0941 01 | 78           | 1046                        | 872  | 943   | 874  | 985       | 40 | 898  | 44 | 8     | 129 | 1032 | 55                     |  |
| 31 1091 01 | 91           | 1198                        | 1022 | 1094  | 1024 | 1135      | 44 | 1048 | 48 | 8     | 148 | 1184 | 55                     |  |

Families 31 : class I    34 : class III    37 : class V    have all the same geometry.

The characteristics of these classes are tabulated on the table page 106.

Please consult us, for the class suitable for your application.



# LIGHT SERIES SOLID SECTIONS BEARINGS

## REFERENCES - INTERNAL GEAR

FAMILIES : 32 - 35 - 38

| REFERENCES | WEIGHT<br>Kg | MEASUREMENTS IN MILLIMETERS |     |      |       |      |    |      |    |   |            |      | Teeth Resistance<br>kN |
|------------|--------------|-----------------------------|-----|------|-------|------|----|------|----|---|------------|------|------------------------|
|            |              | De                          | Di  | Ce   | Ci    | Fe   | Ne | Fi   | Ni | m | GEARS<br>z | D    |                        |
| 32 0411 01 | 31           | 486                         | 325 | 484  | 409,5 | 460  | 24 | 375  | 24 | 5 | 67         | 335  | 32,4                   |
| 32 0541 01 | 43           | 616                         | 445 | 614  | 539,5 | 590  | 32 | 505  | 32 | 6 | 76         | 456  | 40,3                   |
| 32 0641 01 | 51           | 716                         | 546 | 714  | 639   | 690  | 36 | 605  | 36 | 6 | 93         | 558  | 40,3                   |
| 32 0741 01 | 58           | 816                         | 649 | 814  | 739,7 | 790  | 40 | 705  | 40 | 6 | 110        | 660  | 40,3                   |
| 32 0841 01 | 70           | 916                         | 736 | 914  | 840   | 890  | 40 | 805  | 40 | 8 | 94         | 752  | 54,3                   |
| 32 0941 01 | 76           | 1016                        | 840 | 1014 | 939   | 990  | 44 | 905  | 44 | 8 | 107        | 856  | 54,3                   |
| 32 1091 01 | 92           | 1166                        | 986 | 1164 | 1089  | 1140 | 48 | 1055 | 48 | 8 | 125        | 1000 | 54,3                   |

Families 32 : class I    35 : class III    38 : class V    have all the same geometry.

The characteristics of these classes are tabulated on the table page 106.

Please consult us, for the class suitable for your application.



# LIGHT SERIES SOLID SECTIONS BEARINGS

## REFERENCES - WITHOUT GEAR

FAMILIES : 33 - 36 - 39

| REFERENCES | WEIGHT<br>Kg | MEASUREMENTS IN MILLIMETERS |            |      |      |    |           |    |      |
|------------|--------------|-----------------------------|------------|------|------|----|-----------|----|------|
|            |              | De                          | DIMENSIONS |      |      |    | FASTENING |    |      |
|            |              |                             | Di         | Ce   | Ci   | Fe | Ne        | Fi | Ni   |
| 33 0411 01 | 29           | 486                         | 342        | 484  | 344  |    | 460       | 24 | 368  |
| 33 0541 01 | 38           | 616                         | 472        | 614  | 474  |    | 590       | 32 | 498  |
| 33 0641 01 | 45           | 716                         | 572        | 714  | 574  |    | 690       | 36 | 598  |
| 33 0741 01 | 52           | 816                         | 672        | 814  | 674  |    | 790       | 40 | 698  |
| 33 0841 01 | 60           | 916                         | 772        | 914  | 774  |    | 890       | 40 | 798  |
| 33 0941 01 | 67           | 1016                        | 872        | 1014 | 874  |    | 990       | 44 | 898  |
| 33 1091 01 | 78           | 1166                        | 1022       | 1164 | 1024 |    | 1140      | 48 | 1048 |

Families 33 : class I 36 : class III 39 : class V have all the same geometry.

The characteristics of these classes are tabulated on the table page 106.

Please consult us, for the class suitable for your application.

# LIGHT SERIES AND SOLID SECTIONS

TABLE OF DEFLECTION UNDER MASTER LOAD

| RACEWAY<br>MEAN DIAM.<br>(mm) | MASTER<br>LOAD<br>(N) | MEASUREMENTS IN MILLIMETERS              |           |         |                                   |           |         |
|-------------------------------|-----------------------|------------------------------------------|-----------|---------|-----------------------------------|-----------|---------|
|                               |                       | MAXIMUM DEFLECTION<br>(average 3 points) |           |         | MAXIMUM MEASUREMENT<br>IN 1 POINT |           |         |
|                               |                       | Class I                                  | Class III | Class V | Class I                           | Class III | Class V |
| 411                           | 200                   | 0,30                                     | 0,15      | 0,05    | 0,40                              | 0,20      | 0,08    |
| 541                           | 200                   | 0,30                                     | 0,15      | 0,05    | 0,40                              | 0,20      | 0,08    |
| 641                           | 250                   | 0,35                                     | 0,18      | 0,05    | 0,45                              | 0,23      | 0,08    |
| 741                           | 300                   | 0,35                                     | 0,18      | 0,06    | 0,45                              | 0,23      | 0,09    |
| 841                           | 300                   | 0,40                                     | 0,20      | 0,06    | 0,50                              | 0,25      | 0,09    |
| 941                           | 400                   | 0,45                                     | 0,22      | 0,07    | 0,55                              | 0,27      | 0,10    |
| 1091                          | 400                   | 0,50                                     | 0,25      | 0,07    | 0,60                              | 0,30      | 0,10    |